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Introducing Queen Bees.

Translated for the American Bee Journal.

At the late general convention of German bee-keepers at Nuremberg, the sixth question proposed for discussion was—"What is the safest and best method of introducing a stranger queen?"

The debate was opened by Major VON HRUSCHKA, the inventor of the honey extracting machine. He said:—"The speediest, simplest and safest process of introducing a stranger queen, whether fertilized or not, or a queen cell from another hive, into a queenless colony, is the following: The implement which plays the principal part in the operation, is one used by ladies in perfuming their dresses, called a '*rafraichisseur*' by the French, and which can be procured from any perfumer or druggist. The purpose is to produce a light stream of moist vapor or spray, by blowing through the instrument when properly charged, so that it would moisten but not wet a hand held in it. The charge used is a mixture of water and essence of peppermint in the proportion of a thimbleful of the latter to a gill of the former. This mixture must be well shaken when to be used, and should not be so strong as to produce any great excitement among the bees when they are exposed to it.

When a stranger queen is to be introduced in a colony in a movable comb hive, comb after comb should be gently lifted out till the native queen is found and removed. Then the combs still remaining in the hive, the sides and ends of the hive, and the bees (the hive having been closed) are to be gently but thoroughly fumigated or perfumed by blowing the vapor of the mixture through the entrance, and through a small opening made in the rear of the hive, repeating the fumigation in about half a minute, to set the bees in gentle commotion, so that each individual may be duly perfumed. The combs and bees that were lifted out are next to be treated in like manner, as each comb is replaced in the hive after repeating the vaporing operation two or three times. Immediately thereupon the queen to be introduced, whether fertilized or not, must be subjected to similar fumigation and perfuming, repeating it two or three times at intervals of half a minute. She is then to be set free on one of the brood combs, and the hive again closed.

This is the whole process; it can be performed n less time than is required to describe it, and out of seventy or eighty queens thus introduced by me, not one instance of failure occurred. Except in the case of some very precious queen, or when the colony is known to contain a fertile worker, I never deem any subsequent examination necessary. Where a fertile worker is known or is suspected to be present, I repeat the perfuming fumigation again in two or three hours, or on the following morning, blowing in the vapor through the entrance and the rear of the hive.

If after this process a queen should be destroyed, it will be found that the colony, though supposed to be queenless, yet contained a queen which escaped detection and removal; or that the mixture of peppermint and water was not properly prepared or sufficiently shaken, and was consequently too weak for the purpose intended. If the mixture be too strong the bees will become highly excited, leaving the interior of the hive and clustering on the outside above the entrance. But in such case I have never observed any ill results, the commotion soon subsiding. The bees return to the interior, and next morning all will be found in order, the queen having been accepted.

The quantity of the mixture to be used on each occasion is from 1½ to 3 tablespoonfuls, according to the size of the colony.

For greater safety, till some skill in preparing the mixture and performing the operation has been attained, preliminary experiments may be made with supernumerary, worthless or common queens.

From box or straw hives, with fixed combs, a swarm is to be drummed out, and the native queen removed; then the combs and the interior of the hive must be well fumigated with the perfumed vapor or spray, after which the expelled bees are likewise so treated, and finally the new queen, perfumed in like manner, placed among and allowed to pass into the hive with the returning bees.

If, when two or more colonies are to be

united in the fall, or at any other time, some of the bees prove to be quarrelsome or pugnacious, they will speedily become pacified and reconciled on being repeatedly perfumed as described. But resort to this mixture is not advisable when a colony is being robbed."

Mr. FUTTERER remarked.— "A somewhat similar process, but using chloroform, and thus stupefying the bees, has been recommended in the Bienenzeitung. I have tried this ten or twelve times, and have lost some very fine queens. The use of grated nutmeg has also been proposed. I have tried it and succeeded three times out of four, but the mishap, though only one in four, may involve the loss of a valuable queen."

Mr. LESCHETZKY said: "I have charge of an eight hive pavilion (the joint property of sixteen members of our association) which is used exclusively for rearing queens, and I thus had many opportunities for observation. I have reared more than one hundred queens in the pavilion, and employed various methods of introducing them in queenless colonies, but none ever proved to be entirely satisfactory, all being attended with difficulties, risks and delay. I was always ready to sacrifice a queen in my efforts to discover or devise some simple and sure process. On reflection I conceived that after removing the native queen the intended successor would be readily accepted if I operated in accordance with the natural habits of the bee. With this view I caught and removed the old queen in the morning, and attached the cage containing the strange queen to one of the *brood combs*, and liberated her *in the evening of the same day*. Next morning I examined the hive, and found the queen safe and laying eggs. Again, I removed the native queen in the evening, placed her intended successor caged on a brood comb purposely set in the rear adjoining the movable door of the Dzierzon hive, and liberated her in the evening of the following day. She was at once accepted. I repeated this process frequently until I was satisfied that it had been fully tested, and with proper attention was always successful. Only once was a queen killed for me, and then the mishap was attributable to my mistake in attaching the cage containing the offered queen to an empty comb instead of a brood comb.

I am thoroughly convinced that the most dangerous foes an introduced queen has to encounter are the young bees found on the brood combs, and our first endeavor must be to make these familiar with the offered stranger, so as to induce them to accept her freely. Hence I use the precaution now to place a brood comb at the rear end of the hive, next the door, and to it I attach the cage containing the queen I would introduce. I can then promptly liberate her at the proper time, without producing excitement among the bees.

By this process, now used successfully more than fifty times, the bees do not become conscious of queenlessness, and never begin to build queen cells, and as the new queen is liberated *in the evening*, when bees are known to be more peacefully disposed than at any other times, it is evident that the process has many advantages over any hitherto employed, especially as brooding is thus interrupted only for one day."

Mr. KNEIPP observed:—"When I wish to change queens, I catch the old or native queen, cage her and let her remain in the hive that day. The cage thus becomes imbued with the scent or odor of the colony. In the evening, at dusk, I remove this queen and substitute for her the one I intend shall be her successor, using the same cage and besmearing it on every side with *honey taken from the same hive*, and immediately reinserting it. If the queen thus given is a very precious one, and I desire to be absolutely sure that she will be accepted, I puff segar smoke gently in the entrance of the hive at intervals of thirty minutes, for about two hours. In from twenty-four to thirty-six hours, I liberate her, using segar smoke again as before. Thus proceeding I have invariably been eminently successful.

When I desire to unite the bees of two or three colonies, I drive out or shake off the bees successively into a large glazed earthen pot, and introduce the selected queen directly among them, unconfined. I then thoroughly mix or shake together the whole mass, two or three times at short intervals, and then, to prevent the generation of excessive heat, I transfer them immediately to the hive prepared for them.

Since I employ this method I have never had bees or queens injured or killed, as the bees become exceedingly alarmed and are apparently glad to escape with life."

Mr. DZIERZON said:—"It frequently happens, after the removal of the old queen, that her successor, when introduced, is apparently well received and accepted by the bees, but is subsequently, a week or ten days later, destroyed by them. It is, of course, desirable that a valuable queen should not incur such risks, and if we would be sure of her thorough acceptance she should be given to a second swarm, from which a still virgin queen has just been removed, or to an artificial colony having queen cells nearly mature. The workers of such colonies have been for some time queenless and are ready to accept and permanently retain any fertile queen that may be offered to them. Care must, however, be taken to remove every young queen such colony may contain, or the new queen might still be lost, and though queen cells will commonly be destroyed by the workers on the acceptance of a queen, it is safer to remove them immediately, especially if the embryo queen be nearly mature, so that the introduced queen may not incur the risk of being killed by an emerging one."

Mr. REITENSPIETZ remarked:— "When I wish to introduce a valuable Italian queen in a healthy, populous black colony, whether in spring, summer or fall, or even in unfavorable weather, I proceed in the following manner:

"At noon, or in the afternoon, I capture the native queen, confine her in a cage and place this in or on a *brood comb*. Having replaced the combs taken out when searching for her, I close the hive and leave it in this condition twenty-four hours. Then, that is at about the same hour

on the following day, I take out the cage, remove the old queen, and substitute the Italian queen for her in the same cage, which I set aside for a while till the queen becomes quiet and resigned. I then besmear it on all sides with pure nice honey, and replace it in the same position it occupied before in the hive. Now closing the hive I leave it in this condition several days, four days being best, according to my experience. Then, opening the hive again, I destroy all the queen cells that may have been started, take out the cage, remove the slide and cover the opening with a thin plate of wax, to keep the queen confined. Replacing the cage in its former position and closing the hive, let the bees liberate the queen at their leisure. The cage may be taken away after she has left it. I will guarantee that by this method queens, whether fertilized or not, may always be safely introduced."

Mr. MASBAUM said :—"I have this year taken bees from several colonies, shaken them together thoroughly, and immediately given them the queen I desired to introduce, and she was always readily accepted.

A few weeks ago, by way of experiment, I drove out a swarm from a straw hive, and after securing the old queen and returning her to the parent stock, I gave a new queen to the swarm. Although these bees had been accustomed to the presence of a fertile queen of the previous year, and the one given to them was a young one only fertilized a few days before, she was kindly received and accepted. I must state, however, that I let the driven swarm and the given queen remain together, shut up in an empty hive, fully twenty-four hours before I gave them combs. Had combs been given to them immediately, the result might not have been so favorable."

Mr. Klipstein stated that "a well tested and sure mode of introducing queen bees is as follows: After the old queen has been removed introduce her intended successor the same evening, merely besmearing her with honey, and placing her where the larger mass of the bees is congregated. The stranger queen may also be besmeared with honey taken from the hive in which she is to be introduced, and set at large on one of the *brood combs.*

Removing the old queen in the morning and introducing her successor in the evening, is probably advantageous simply because the bees will retain their consciousness of queenlessness perfectly till evening, without yet adopting measures to supply their want. Mr. Dummer, of Homberg, in the Bavarian Palatinate, communicated this method to me, assuring me that he had repeatedly introduced queens, whether fertile or virgin in this manner with the most gratifying results."

When practical men are just commencing the study of a science which should direct their daily labors, they must not be treated as patient and trained students eager to explore the whole Temple of Nature; but rather like cautious and somewhat unwilling candidates, who must be lured into its outer vestibules, by wisdom conveyed in pleasant and familiar words.

What are the Essential Conditions of Early Swarming?

Translated for the American Bee Journal.

This was the seventh question for discussion, on the programme of the Sixteenth General Convention of German Bee-keepers at Nuremberg, September, 1869.

DR. ZIRVANSKY.—I am a decided advocate of simplification, and constantly endeavor to introduce it wherever practicable. Hence I desire to apply it to the subject before us, which would then be made more easily intelligible. As it stands I conceive the proper answer is—"*There is only one essential condition of early swarming,*" and that is to be found not in the bee community but in the bee-keeper himself. It consists in *an accurate and thorough knowledge of the nature of the bee.* If the bee-keeper has such knowledge, he will know also the wants of his bees, and, knowing these, he will be careful to have them fully supplied at the right time, and will thus always have the colonies in his apiary duly prepared for early swarming.

By virtue of his knowledge of the nature of the bee, the bee-keeper is aware that he can expect to have early swarms *only* from populous colonies; and he will consequently take care to winter only strong stocks. But in order to do this, he will, *first*, select strong stocks in the fall; *secondly*, he will be careful that they shall remain strong during the winter; and *thirdly*, will manage that by early breeding the population shall increase rapidly in the spring.

Let me now recapitulate in order.

First. If the colonies intended for wintering are to be strong in the fall, they must have *healthy*, *prolific*, and *still young* queens. The grand secret for effecting this is, *never to permit the queens in your apiary to approach the period of superannuation*, but to renew them frequently. When doing this, furthermore *select queens bred not earlier than in July or August.* Such queens will continue laying late in the fall, resume it vigorously at the close of winter, and have plenty of brood early in the spring. In every case the queen must always be regarded as the most important member of the family, as it depends on her altogether whether the colony is in any respect to be praised or not.

In every apiary there will always be found some stocks weaker than others, at the close of the season; and it becomes important to equalize the whole, if practicable. This is done by transferring combs of brood from the stronger stocks to the weaker. Where the number requiring to be thus reinforced is not large, so that they can quickly be adequately supplied, the result is always satisfactory. But if the weak colonies happen to be disproportionately numerous, the attempt thus to equalize them all would unduly weaken the stronger, and hence be disadvantageous. In such case, the proper course is to break up some of those weak stocks, or unite several.

Secondly. If the colonies are to remain strong during the winter, they must in addition to having young prolific queenes, be supplied with sufficient stores for their support.

It has been a subject of frequent debate, what

quantity of stores, consisting chiefly of honey gathered from spring blosoms, is required to carry a colony prosperously through the winter? And the striking differences in the quantity named by experienced bee-keepers, arise from the fact that the disputants have not agreed upon a definite period for which supplies are to be estimated. Some reckon from the time pasturage fails in the fall to its revival in the spring—a period of from four to six months. Others regard only the time during which the bees do not fly—a period usually of not more than six or eight weeks. Almost every fall we find bees of some colonies occasionally flying out, long after pasturage as a source of supply has failed. In the comparatively brief term during which they remain altogether secluded in their hives, and before brooding commences, even the strongest colony consumes very little honey—hardly *a pound* in *a month*. The requisite supply for so short a period is consequently not worth mentioning. In estimating for the winter's supply, the first mentioned term is to be regarded as the normal period, and with reference thereto we may very properly say that the *bee winter* begins at the time *when the colony commences drawing on its hoarded stores*, and continues till such time in the spring *when the daily gathering of honey begins to exceed the daily consumption*, for then only may a colony depending exclusively on its own resources be regarded as being safe. To be provisioned for this period, every colony should have *at least* twenty pounds of honey. Taking long experience as my guide, I have come to the conclusion that it is not sufficient to allot to a colony just such an amount of stores as will barely though surely suffice to carry it through till spring opens. *It must have somewhat more than this*, so that it shall not only feel comfortable, but likewise encouragingly *rich;* for if the bees become conscious that their supplies are scant, they will use every drop of honey grudgingly from an instinctive dread of want, and brooding will be accordingly restricted or deferred.

If in consequence of a general failure of pasturage in any year, we are constrained to resort to substitutes for honey to provision our bees in the fall, good brown sugar candy is to be preferred. Very liquid or much diluted food must be carefully rejected as injurious.

For successful wintering perfect, quiet, and protection from driving winds and extremes of cold, must be provided for, and frequent temptation to fly guarded against. Placing the bees during winter in a dark cool chamber or cellar, or in some special repository, is probably the best mode of securing these ends in northern countries.

Thirdly. Strong colonies, having prolific queens, and well supplied with stores, will commence brooding early; and such, if other circumstances be favorable, will early be in a condition to swarm.

As regards the size and form of hives, practical bee-keepers are, I presume, pretty much agreed. Bees in a small hive *may* swarm earlier than those in a large one, and it is a fact founded on physical principles that a colony in an upright or standard hive *will* swarm earlier than one in a horizontal or lager hive. Again, certain local or provincial varieties of the bee are popularly regarded as naturally more prone to early and frequent swarming than others—a prejudice of of which dealers are apt to avail themselves in recommending their stock. The heath bee of Luneburg is usually considered as being at the head of this list; then follows the Carniolian bee; whilst the Italian is thought to have this propensity least developed. There may be some truth in these popular notions, but I deem it of little importance—believing that what there is of it is based on local causes, the influence of prevailing weather, peculiarities of climate or pasturage, or customary management, and hence as certain to prove transitory and variable. I have in my apiary the pure Italians, the common black bees hybrids, of these, heath bees from Luneburg, Carniolian bees, and bees from Lower Austria; and the alleged differences between them, in swarming propensity, has altogether disappeared, or rather it has in my case become almost entirely reversed, for now among all my bees, the Italians swarm earliest. Still, I have cultivated the others too short a time yet, to speak very positively about this matter, though I feel assured that in the heath and the Carniolian bee this disposition has considerably diminished, and probably in three or four years more there will be no difference perceptible. Hence I am disposed to conclude that, with proper management, and with due reference to weather, climate, exposure and pasturage, the beekeeper has swarming completely under control. If he knows the nature and habits of bees and attends duly and seasonably to their wants, he will have strong colonies in the spring, because he will winter only such as have young prolific queens, with ample supplies, in good substantial hives, well protected from extremes of cold and great variations of temperature, and in a position where they are least liable to disturbance; and such colonies will produce early and good swarms.

DZIERZON.—The chief requisite for early swarming is suitably, warm, humid weather. That bees in some years swarm early and frequently, and in other years late or seldom, is owing principally to the state of the weather. Warm and moist weather is more conducive to early brooding, and thus promotes early swarming. If nature herself do not present these conditions, the bee-keeper should endeavor to supply them in part at least. To this end feeding with diluted honey is very serviceable, as it leads to the production of brood, and thus fosters swarming. It is also advantageous to keep a constant supply of soft water near the apiary and accessible to the bees, that they may readily procure what they need; because if they are in want of water, brooding will be checked, however much honey there may be in the hive—and it is important that brooding commence early *and proceed uninteruptedly.* A temporary cessation of it, after it has once commenced in the spring, is always injurious, and the utmost care should be used to prevent it.

MASBAUM.—In general early swarming is undoubtedly desirable; and the bee-keeper can contribute materially to having his colonies in proper

condition for such results. But though a colony is populous, and apparently in all respects in a condition to send out a swarm, we are nevertheless at times doomed to wait for one in vain. In such case, seasonable interference is advisable. If the colony is in a box or straw hive, drive out a swarm; if it is in a movable frame hive, make an artificial colony.

DR. PREUSS.—In my neighborhood, where straw hives are almost exclusively used, I have had opportunity to make observations on the requisite conditions for swarming—early swarming particularly—some of which I desire to communicate.

In some colonies the swarming propensity is regarded as an inherited and transmissible taint. They distinguish themselves, year after year, by producing swarms early. This is easily explained. An early swarm fills its hive with the finest worker comb and stores up an abundance of honey and pollen. Next spring it has plenty of supplies, and no vacancies in its hive to be filled with comb newly built at the cost of time and honey. An early swarm again is the natural consequence; and so on successively.

Secondly.—Early swarming is very much dependant on the character and completeness of the comb which the hive contains. A disproportion of drone comb retards or prevents it; whereas an abundance of worker comb fosters and secures it. Hence, cutting out worker comb in straw or box hives, in the spring, is injurious; none except mouldy or damaged combs should be removed.

Hives should be protected from prevailing winds. Colonies well sheltered will make an astonishing progress beyond such as are exposed to a current of wind, especially if it come from the north and northeast.

For early swarming a southern exposure is proferable. I had occasion last summer to observe two stands, one of which had a southern exposure without shelter from the rays of the sun; the other had an eastern exposure, and was so placed that after twelve o'clock, noon, the sun did not shine on any of the hives. The colonies in the former gave two swarms each, before any issued from those in the latter, though they were equally populous. In changeable weather it is highly important that after the young queen is mature, the old queen should have an immediate opportunity to depart with a swarm. She should be able to avail herself of the first hour of sunshine, to leave; for if this be missed and cold or cloudy weather follow, one of the queens—usually the young one—will be killed, and all the supernumerary queen cells destroyed. Then we shall either have no swarm, or it will come two weeks later.

To promote early swarming, the material of which the hive is made, should be readily permeable by solar heat. For this reason straw is, and probably will ever be, the best material that can be employed.

A constant and regular supply of water, conveniently placed, is of great importance. As soon as brooding commences bees need much water, and they should be supplied with it in shallow dishes or troughs set near the apiary, unless that is situated near a spring, brook, or stream. I have known bee-keepers to turn up their straw hives when the weather grew warm in the spring, and pour in a pint of pure water between the combs, and this with decidedly favorable results. Water also serves to dissolve candied honey, and when thus supplied, enables the bees to use such honey on days when they could not leave the hive without risk of being lost.

These observations show why movable frame hives are less conducive to swarming than straw hives with fixed combs. In the first place, movable frame hives are rarely so compactly filled with combs, as the others, in which these are more closely built; and secondly, the solar heat does not penetrate them as readily, nor is it retained as long, as in the case of straw hives.

Those who use straw or box hives, and whose bees do not swarm before the 20th of June at latest should resort to driving or drumming out a swarm. This operation can be performed in thirty minutes, and obviates further delay. The driven swarm is to be hived, and set in the place of the parent stock, which now, nearly deprived of mature bees, but well supplied with honey and brood in all stages, should be set in the place of some strong colony now removed to a new location in the apiary. The latter, retaining its queen, young bees, and brood, will in a few days be as populous as ever; and may then again be used for a similar purpose—if the first driving was not too long delayed. We shall thus have three colonies from two—an increase of fifty per cent., with a certainty that all three will thrive.

Bees should have a liberal allowance of fresh air during all extremely hot weather; and if the stocks are strong, the honey boards and the blocks may be entirely removed.

[For the American Bee Journal.]

Michigan Bee-keepers' Convention.

The Michigan Bee-keepers' Association convened at Lansing, March 23d; President Moon in the Chair.

Mr. Rood read a paper on spring and winter management.* A paper from Dr. A. V. Conklin, on the same subject, contained essentially the same recommendations.

A paper from E. Gallup, Orchard, Iowa, on bee maladies, suggested that foulbrood and dysentery were only products of ignorance and carelessness. He thought proper feeding and ventilation would remove these dreaded destroyers. He had known nothing of them.

Mr. Rood said it was evident friend Gallup knew nothing of these diseases. He knew foulbrood to be a terrible scourge, and believed it contagious; and that it occurred under the most careful management. All afflicted colonies should be buried low and deep.

The Italian bee was then considered in a paper by J. M. Marvin, of St. Charles, Ills. He gave the following points of superiority: 1st. Its excellent temper. 2d. Its beauty, and the consequent ease of detecting the queen. 3d. As quicker and better workers. 4th. Greater hardiness. 5th.

* Will be inserted hereafter.

Greater prolificness. 6th. Tenacity in adhering to the brood. 7th. The queen's habit of adhering to the comb. 8th. Superior success in resisting the miller and moth-worm. 9th. Greater endurance in times of scarcity. 10th. Adherence to the comb in artificial swarming.

Summer management was then discussed, but no new points were brought out.

EVENING SESSION.

President Moon delivered a very able address. He brought out in vivid colors the inducements to apiculture; showed the need of concerted action and congressional aid; and closed with an earnest appeal for a NATIONAL BEE-KEEPERS' CONVENTION. Several members warmly advocated this project. Several letters from prominent bee-keepers, also urging a call at some central position, were then read. After considerable discussion, the following resolution with the preamble, was unanimously adopted.

Whereas, the subject of a National Bee-keepers' Association was much talked of at our last gathering;

And whereas, in our judgment, the time for the same is fully come; therefore

Resolved, That we issue a call for a National Bee-keepers' Association, to be held at the city of Indianapolis, Indiana, on the 10th and 11th of August next.

THURSDAY, *March 24th.*

The Melextractor was commended to favor by Mr. Rood, of Wayne, Mich., and Mr. Hart, of Wisconsin, as being second only in importance to movable frames, as an aid to the apiarian.

Alsike clover was highly recommended by several gentlemen of experience, not only for bee pasturage, but also as a forage plant.

Mr. Rood would raise queens in nuclei, so as to always have some on hand.

Mr. Hart said queens were apt to chill, and thus be reduced in size, if not destroyed. In his hives he had them above the frames, separated by a wire gauze; thus they were never chilled, and were much larger.

Mr. Mitchell described the queen-breeding cage of Dr. Davis, stating that it worked admirably, and recommended its use to all.

The different methods of artificial swarming were then given. All of which may be found in Langstroth on "the Hive and Honey bee;" a copy of which every apiarian should own.

Mr. Rood read a paper on transferring.*

The Secretary then read a paper on the subject of inciting an increased interest in apiculture. He referred to the great encouragement which increased information yielded to the apiarian; gave some examples of the great profit as related to labor and expenses of bee-culture; showed how it incited its votaries to higher mental improvement; and proved it to be one of the greatest stimulants to a higher moral culture, and in view of the good which society would reap from an increased of interest in apiculture, offered the following resolutions, which were adopted:

1st. *Resolved*, That, in the present state of our finances, we deem the publication of a work on apiculture for gratuitous distribution, or the dissemination of works already written, at the expense of this Association, ill advised.

2d. *Resolved*, That recognizing the value of Adair's Annals of Bee-culture, the American Bee-Journal, and Illustrated Bee Journal, we do all in our power to promote the circulation of the same.

3d. *Resolved*, That, as individuals, we will do all in our power, in our respective communities, to increase the interest in bee-culture.

4th. *Resolved*, That we, as individuals and as an Association, will encourage popular lectures upon this most interesting and profitable vocation.

A resolution was passed instructing the Secretary to forward the proceedings of the meetings to the bee journals for publication.

* Will appear in a future number of the BEE JOURNAL.

[For the American Bee Journal]

Introducing Queen Bees.

MR. EDITOR:—Last season I introduced four hundred and five (405) queens, into all sorts of hives in the country. Of this number sixty were killed in the introduction and six were killed after they commenced laying. Of the sixty-six colonies that killed their queens, four failed to supply themselves with another perfect one. One colony killed the second queen given to it. Much the fewest number of losses occurred about swarming time.

My plan of introduction was to kill the native queen, and immediately introduce the Italian one, confining her to her cage with a plug of honey comb, which the bees could eat out in a day or two, thus liberating her.

I would like to hear from others who have introduced hundreds in a season, what proportion were lost, and what was the plan of introduction.

I will have to put in from eight hundred to one thousand queens the coming summer, and wish to get at the most practical mode of introducing generally over the country. I have a convenient wooden box weighing only 2½ pounds, in which I can carry three dozen queens, with food to last them one or two weeks.

Bees in Eastern Ohio, and in Pennsylvania west of Pittsburgh, during the last summer made but little honey, and did not supply the losses of stocks.

Italian bees have shown their superiority, most especially in the number of swarms produced.

If we could only manage to introduce all queens safely to the hives for the people over the country, the number of our sales would be increased fourfold. I would give good wages for hands that could do such work.

R. WILKEN.

Cadiz, Ohio.

It is a singular fact that wax is more rapidly and largely made by feeding the bees with dissolved sugar, than from the honey they collect themselves; the sugar thus evidently containing more of its constituent elements.

Chautauqua County (N. Y.) Bee-keepers' Association.

Pursuant to notice a bee-keepers' association was organized at Delanti, on Saturday, January 29th, 1870. J M. Beebe was chairman of the meeting, and P. Perrin secretary.

On taking the chair, Mr. Beebe appropriately addressed the meeting as to the nature of the proposed association and the utility of its formation, as follows:—

"*Gentlemen Bee-keepers*, As I understand it, we have met here to day for the purpose of organizing a Chautauqua County Bee-keepers' association. I hope we all see the utility of such an object, and may unitedly make an effort in that direction and be certain of success. We read in the agricultural papers the reports of those who make bee-keeping a speciality. Those who make the most from bees are those who best understand their nature and habits. By meeting together and freely discussing the subject, we may profit much by each others' experience. This county is one of the best in the State of New York for bee-keeping. No better honey is carried to the New York or Chicago markets, than the honey from Chautauqua county. The difference is not in the bees that gather the honey, but in the plants from which the honey is extracted. Our principal honey producing plants are white clover and basswood; and as these furnish an abundance of the very best honey in the world, it remains for us to furnish ourselves with the means of securing the delicious sweet that has so long been allowed to go to waste. And we know of but one way to do it—that is, by keeping a sufficient number of bees to gather it. Man cannot gather it, nor has he ever invented a machine by which it may be secured. And here the question very properly arises—how may we best propagate this little industrious honey-bee? As well as many more questions of like importance, for the better understanding of which an association of bee-keepers is intended. We can statedly meet together and report our success or otherwise, our ways of managing, &c., and learn of each other; and all who wish to become interested in bee-keeping should meet with us, and take part in the discussions."

The Secretary then read a letter from Mr. J. C. Cranston respecting the bee-moth and its ravages. Then followed a general discussion on the bee—how to raise the greatest amount of honey with the greatest profit, and other similar questions. After which, on motion, the President appointed the following committees, to report forthwith:

On Constitution—Messrs. C. E. Benton, E. L. McCullough, and P. M. Miller.

On Permanent Organization—Messrs. N. Crissey, H. Miller, and O. E. Thayer.

Thereupon a recess of ten minutes was taken, and on reassembling, the Chairman of the Committee reported a Constitution for the Association, which being read, was adopted by the meeting.

The Committee on Permanent Organization reported the following list of Vice Presidents: M. C. Tarbox, Arkwright; E. H. Jenner, Busti; J. R. Hatton, Clymer; O. E. Thayer, Carroll; L. Simmons, Charlotte; H. Harrington, Cherry Creek; J. Wood, Chautauqua; J. J. Cassety, Dunkirk; Wm. Russell, Ellery; S. S. Derby, Ellicott; G. Beardsley, Ellington; Isaiah Golding, French Creek; B. L. Harrison, Gerry; M. S. Snow, Hanover; A. L. Williams, Harmony; J. B. Whittaker, Kiantone; H. Q. Ames, Mina; S. Sage, Pomfret; T. Sweet, Poland; G. Ryckman, Portland; S. G. Hamilton, Ripley; Hollis Thompson, Stockton; H. Sheldon, Sherman; J. E. Cranston, Sheridan; T. Searl, Villenova; and —— Hall, Westfield.

The report was adopted, and a ballot was then taken for the other officers, with the following result.

For President—T. S. Moss, of Brocton.

For Secretary and Treasurer—C. E. Benton, of Fredonia.

For Executive Committee—J. M. Beebe, of Cassadaga; J. C. Scudder, of Kiantone; and M. S. Snow, of Forrestville.

On motion it was decided that the first annual meeting of the Association be held at Mayville, September 20th, 1870, at 12 M., and thereupon the meeting adjourned.

[For the American Bee Journal.]

Non-Swarmers vs. Swarmers.

A question of the greatest importance to most bee-keepers is—How can we secure the largest amount of surplus honey, in the best marketable condition, in a season? Can it be best done by a continued increase in colonies; or is there a limit at which the increase becomes unproductive and unprofitable? I believe all authorities admit the possibility of any given district becoming overstocked. When this limit is reached, either from an insufficiency of pasturage, or from an indisposition of the bee-keeper to increase his stock from any cause whatever, what is the best system of management to secure the greatest amount of honey, with the least cost? Is there any management reduced to a system, by which we can control and prevent further increase of colonies, and make the whole increase of bees continue to store surplus honey, instead of swarming?

There are some questions of much greater importance to most bee-keepers than the one often so discussed as to the best method of increasing the number of colonies, for since the introduction of movable comb frames and the new system of managing bees incident thereto, together with the great fertility of Italian queens, the increase of an apiary to almost any desired extent, in a comparatively short time, is rendered an easy matter.

With anything like skilful management, the number of colonies may easily be doubled annually, and may even be tripled or quadrupled. And where a man "gives his whole mind to it," we read of eight and ten being made from one in a season. As the increase is in geometrical progression, the number in a few years would become enormous, and overrun all bounds. Say that we already have fifty colonies, and take the

lowest ratio, in three years more there would be four hundred; and in three more, sixteen hundred; which, to most bee-keepers, would be an alarming extent. It is true I have made no allowance for "mishaps" in wintering or otherwise; but I have taken the lowest ratio, and it is well known that the Italian bees, in anything like a favorable season or district, will send out two or three natural swarms, and the first swarms are very apt to send out others. Our territory thus becomes overstocked, and instead of our bees gathering large quantities of surplus honey, our pasturage only affords enough to take our strongest colonies through the winter, leaving the weaker ones to be doubled up, or to perish.

To say nothing of overstocking the territory, there are but comparatively few bee-keepers who make it an only and especial business. Most of them are farmers, mechanics, &c., who cannot devote their whole time to their bees, or even so much of it as is necessary to attend to over forty or fifty colonies, especially at swarming time, which usually occurs at a very busy season of the year. And suppose they should succeed in saving all the swarms, after having gone to the expense of procuring hives for them, what are they going to do with them? They already have as many as they can conveniently spare the necessary time for profitable management. There are but few places where the annual increase of an apiary can be sold. I have seen places where you could scarcely give the swarms away, if you required an empty hive to be furnished. So we are compelled to resort to the brimstone pit, if we would keep our numbers within bounds. I know some intelligent bee-keepers who practice this, and contend that, under the circumstances, it is the most profitable way that they can be disposed of. A few persons can make a large number of colonies profitable, when they are raising Italian queens for sale, and have a demand for them. But there is not one in a thousand of the host of bee-keepers who wish to keep more than from ten to fifty colonies, to supply their families with the delicious sweet and furnish some surplus for sale, to assist in paying for the family groceries, and for the purpose of affording recreation for their leisure hours.

In order to do this satisfactorily, we want a system of management, by which swarming can be controlled and prevented, and the increase of numbers be made to store surplus honey in the most suitable condition for market; instead of storing it in an additional number of hives, for the support and wintering of an increased number of colonies. When this shall be accomplished, and the system fully developed and reduced to practice, it will stand third of the recent great improvements in apiculture—the movable combs and the honey emptying machine occupying the first and second positions. And I doubt whether the honey-emptier should be placed before it, for say what we will in its favor, the strained honey will not find so ready a sale, at as good prices, as honey in the combs.

Several experienced apiarians have been giving their attention and labor to obtain these results, and with some success. Mr. Jasper Hazen has been experimenting for some years and calling attention to this subject; and from his statements he appears to have been quite successful in results. He says that he has been able to secure from fifty to two hundred pounds of box honey to the hive, and from recent experiments believes that he can secure an average of from 150 to 200 pounds per hive, annually, which certainly seems very satisfactory. He shows by a calculation the advantage and greater profit of keeping a fewer number of non-swarming colonies; and if the basis of his calculations is correct his "figures cannot lie." Nor have I any reason to doubt the basis of his calculations, nor his statements in regard to the results of his system of management, as some one has done. Although he is a stranger to me, I go for treating all men with such courtesy as to credit their statements until they are proven incorrect. He has manifested no disposition to "keep his light under a bushel," but has repeatedly published accounts of his system and its operation; and that system is not at all confined in its application to his particular hive. It may be used in connection with various other styles of hives. While I confess that I have failed to prevent, or even to retard swarming by simply giving plenty of surplus box room (at least it seemed to me plenty), there are too many contingent circumstances to be taken into consideration, for me to say that, because I have failed to secure such result, therefore his statements in regard to *his own* are incorrect. I have a case in mind now, of last season's experience. A strong colony of Italians, in a standard Langstroth hive, was furnished early with six 5lb. boxes—some of them containing empty combs. They stored some honey in the comb while the apple trees were in bloom, but on the 2d of June they swarmed—leaving the boxes empty, having removed from them all the honey they had previously stored therein. And they did not stop at one swarm. But I have not experimented to any extent, to test the system. I have only used hives of the ordinary size. Should I succeed in achieving such results as Mr. H. reports, I shall be better satisfied with it, than anything I have yet seen in bee-keeping.

That veteran and successful apiarian—Mr. M. Quinby—who has always favored progress and improvement, whether of his own origination or of others, having felt the necessity and the importance of such a system, gives the gist of the desired improvements, in the following concise language:—"*I want to control swarming, and* PREVENT *it, not by giving extra room and then guessing that they will not swarm. I want to be certain.*" Yes, that is just what many more of us want! He intimates that he has secured such results for himself, with his new hive and new management, and has reduced it to a system; which, as I have before said, is an improvement in bee-keeping which, in my humble judgment, deserves to stand second only to the introduction of the movable combs. I hope Mr. Quinby will more fully develop this system, by giving a detailed account of its operations, and his success with it the past season. Some one else will soon be putting in claims for its discovery, and claim a patent right for it; or they will improve upon it before they know what it is. This is a

fast age for improvements, "*so called.*" One man already says—see BEE JOURNAL, Vol. V., page 125—"Although I do not know the exact plan of his (Quinby's) new hive, in one thing I think ours are superior. It is in not having the frames connected in any way with *any part* (italics not mine) of the hive." There we have it! Frames don't touch the hive, top, side, nor bottom! and not even "*connected*" by the ends of nails (or standing on stilts) as the frames in Mr. Hazen's hive. Probably suspended from a pole above, by some "new but simple and ingenious device" —but I am digressing.

It is to be hoped that Mr. Quinby and Mr. Hazen will see proper to continue to give us accounts of their operations, in the AMERICAN BEE JOURNAL—that most excellent and impartial medium of communication for all bee-keepers.

I should like also to hear from those who have used the honey emptying machine freely. What effect has the repeated emptying of the comb upon the swarming propensity of the colony?

Pelee Island. THADDEUS SMITH.

[For the American Bee Journal.]

Replies and Remarks.

I have received several letters from correspondents, requesting me to give my views on the prevention of swarming; also, how to secure the most honey—whether by allowing a moderate increase, or by preventing swarming altogether. Among the rest, NOVICE asks a favor (see November No. of the BEE JOURNAL, page 184). I have always experienced the most difficulty in the prevention of swarming, in seasons when bees gathered sufficient to breed rapidly, yet not sufficient to store surplus or to build comb. In such a season, with a very prolific queen, providing there is not more brood comb than she can occupy with brood, cutting out queen cells was no preventive whatever, especially with the Italians. With the black bees a sure preventive has been to remove the old queen early in the season, and substitute a young one. But with the Italians that proves to be no preventive at all. Provided they are gathering honey rapidly, I have had no difficulty *with this method and the hive I use.* Keep abundant box room, and as one set are partly filled, raise them and insert another set under; and in the meantime take out occasionally a frame from the brood chamber, containing brood or honey, or both, and insert an empty frame for them to fill. This gives the young bees full occupation below, and also makes room for the queen at the same time. And here a small frame is indispensable, for reasons which I have before given. In times when they are gathering just sufficient to brood rapidly, and not sufficient to store, and you have a number of colonies, you will find some of the queens have more comb than they can occupy. Exchange this empty comb with colonies that are full of brood, until all are equalized.

To a beginner Mr. Quinby's queen yard would be an advantage, to prevent swarming. But in that case you are obliged to cut out queen cells; for if you allow young queens to mature, they will lead out a swarm.

The reader will recollect that, in the spring of 1868, I had thirteen swarms of bees, and eleven of them were as good as Gallup knows how to make. Out of those swarms, I selected one, no better in any respect that I could perceive, than ten others, for the purpose of seeing what I could make out of it. I was determined not to neglect it in any manner, but to attend to everything at the proper time. (You will understand that I am a hardworking farmer, and can as yet only devote leisure time to my bees.) Well, now for the result. On the 20th of May I took out a good swarm, Gallup fashion, hived them, and gave them one frame containing brood and honey. At the time I took out the swarm, queen cells were capped in the parent hive. In four days I took out two frames, each containing a queen cell; inserted each frame in an empty hive; adjusted the division board; and drummed out sufficient young bees to occupy each frame completely. On the 20th of June, the first swarm had its hive full of combs and brood. I then took out two frames containing brood and honey; inserted a mature queen cell in each one of those frames, put the frames in empty hives; drummed out young bees from the swarm sufficient to occupy those two frames; and, mind you, I did not have them half occupied; and on the 20th of July I had four good swarms, all full of combs, bees and honey, and seventy-five pounds of good honey in boxes. (You will recollect that our honey harvest was entirely cut off that season on the 20th of July.) All this was the proceeds of one swarm; and our honey harvest scarcely ever commences until the 20th of July; but that season it commenced on the 10th. The surplus was all obtained from the parent stock and first swarm; the other three were all ready to commence storing at the time the gathering ceased. That honey extractor I have never yet had the pleasure of seeing, for I had no use for one the past season; yet I do not hesitate to pronounce the invention just what is wanted by the practical apiarian.

I will answer Mr. Root's question, without giving the reasons at present. In my experience, and in all localities wherever I have resided, a moderate increase has always given the best results, where surplus honey was the object. But a great deal depends on how that increase is brought about; and if done at all, it must be done, the most of it, early in the season. A hive, such as I use, with a frame taken out, containing brood in the height of the honey harvest, appears to be an incentive to increased activity. Whereas a large frame taken out at the same time, does diminish the working force in the boxes. Those advocates of a non-swarming hive, with box room for 100, 200, or 300 pounds of surplus honey, fail to inform us of one fact, and it is one that has been observed by others as well as myself, namely, that in a cold season like the past, or in high northern latitude, such as Lower Canada, for example, with such amount of surplus room, the bees are obliged to cluster on and around the brood, to keep up the necessary temperature, and will consequently not store any surplus. Whereas, if they were restricted to 20 or 30 pounds surplus room, the same colony could and

would store considerable surplus. Of course these hives can be constructed so as to be properly managed by an intelligent and well posted bee-keeper. Then, why not tell us of this? In the hive I use I have had a swarm build their comb, store and seal up fifty pounds of surplus in five days. But the weather was just right, and in the time of basswood blossoming—the greatest honey-producing blossom that I am acquainted with. We will suppose that Mr. A. buys one of these non-swarming hives. He puts a swarm into it, and the first season they only partially fill it with comb. They are well wintered, and have a good prolific queen. The following spring they gather honey enough to breed rapidly; yet not sufficient to induce them to build comb. When the hive becomes populous, and the queen has all the comb occupied, the bees will swarm. On the other hand, let us suppose they filled their hive with combs and honey, but filled it in the fall, when the queen was breeding very little. The following spring they gather sufficient honey and pollen to keep up the breeding, and do not draw on the last years' store. When the queen has all the cells occupied, they will swarm. What really constitutes a non-swarming hive is, to give the queen empty cells as fast as she wants them, and the workers full occupation; and this can all be done in any form of Langstroth hive I have ever seen. When any one tells you that his hive will give hundreds of pounds of surplus honey, whether the season is good or not, simply because it is *his* hive, it looks much like Jonah swallowing a whale—decidedly *fishy*.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Wintering Bees.

MR. EDITOR:—I wish to say a few words in regard to wintering bees; having tried various ways. I have buried them, or put them in the ground, covered with straw and dirt, ventilated, &c.; but they came out with combs badly moulded; and mice had got into some of the hives, making havoc among the bees and combs, so that I lost several colonies. At another time I took my bees to a neighbor's cellar, which was dry and cool, with some frost in the coldest weather. I did not lose a swarm that winter. Last winter I took my bees to another neighbor's cellar, which was dry, but very warm, with no ventilation worth speaking of. The consequence was that my bees worried themselves so much that many of them eat up all their honey, and died, though the colonies were strong and heavy in the fall.

With my little experience I became satisfied that I now knew what was needed. Last summer I built me a new house, and concluded I would put a cellar under the whole of it, so that I might provide a place for my bees entirely separate. I arranged a cellar under one wing entirely separate from the others, so that I could shut it up so close that no frost could get in, if I chose to keep it out. This cellar, in which I have my bees, is about fifteen feet square. I have it well ventilated, with one widow on each side—have windows hung on hinges, so that I can raise or lower them, as I choose, to let the air pass through. I keep a thermometer in the cellar, and try to maintain the temperature at about 35° above zero. Some days it will go higher and some days fall lower. When it gets colder I lower the windows, and when warmer I raise them. I put wire screening on the outside of the windows to keep out rats and mice, then place straw against the screening to darken the cellar, yet the fresh air is constantly passing through.

I have examined my bees this spring, now the 10th of March, and find them all in good condition except one, from which I took about twenty-five pounds of honey and transferred it from an old hive to a movable comb hive. I supposed they had honey enough left to winter on, but they came up missing. Last fall I put in all those that I thought would winter well, setting them in the back part of the cellar, one over the other, about twenty-five of them about three deep. Then the weaker swarms, which I knew would not winter without feeding, I placed along the side of the cellar. The very heavy ones I set along the middle, leaving a space, so that I could see to all my bees at any time. From the strong heavy swarms I took cards of honey in the frames and inserted them in the lighter or weaker swarms. Thus equalizing them, so that they are all alive yet, so far as I can judge, and the combs appear to be free from mould.

I spread straw on the bottom of the cellar, and between the hives, to absorb the moisture. I have in it about fifty-five colonies. I left ten colonies out on their summer stands for an experiment in out-door wintering, as I supposed them to be strong and good. I found on examining that I have but four colonies left alive, out of the ten. One colony had about sixty pounds of honey in its hive, another twenty, another five, and another very little. Therefore I would recommend wintering bees in a good dry cellar, well ventilated—where they can be looked after at any time, and fed if needed.

I would not know how to get along without the BEE JOURNAL. It has been of much value to me already, and I would advise every one who keeps or intends to keep bees, to take it. I enclose two dollars for my subscription, and two dollars for a new subscriber, to whose address send the JOURNAL.

Decorah, Iowa. JOEL DAYTON.

Artificial colonies should not be made except when forage is plentiful and bees gather honey freely, unless the owner is prepared to feed them liberally.

Bees are endowed with an instinct that teaches them to avoid certain plants that might be dangerous to them. Thus, they neither frequent the oleander (*Nerium Oleander*) nor the crown imperial (*Fritillaria* imperialis), and they also avoid the *Ranunculaceæ:* on account of some noxious property; and although the *Melianthus major* drops with honey, it is not sought.—*Schuckard.*

[For the American Bee Journal.]

Conklin Diamond Hive Rejoinder.

MR. EDITOR:—As the columns of your most valuable Journal are open to all attacks, of right we claim the chance of defence. Let me say to friend Miller, of Peninsula, Ohio, to "keep cool," don't take your hat off and go off half-cocked in great haste, for we wish to have a little friendly talk to you and the readers of the Journal. It is unpleasant to be jumped on so rough-shod and be forced into a controversy to defend one's rights and reputation, especially when the columns of the Journal ought to be occupied by, perhaps, more important matters. But then there is perhaps nothing more interesting to the bee-keeper than the best style of hive, to commence with; and as we believe we have at least one of the best, and came by it honestly, we wish to make this statement.

We invented the Diamond Hive in 1862, as we have said before, and tested it; but the arduous labors of a large practice of medicine prevented us from attending to more than from six to eight stands of bees—just for our own use. In July, 1868, believing the Diamond Hive one of the best in use, (as I had tested the Langstroth, Flanders, American, Quinby, and Buckeye hive form of movable frame, besides several hives that were not of the frame patterns,) I applied for a patent, which was granted October 20th, 1868. I also obtained, as soon as published, Langstroth's great work on the Honey Bee, Quinby's "Mysteries," Flanders' "Sweet Home," King's Bee-keeper's Text Book, Mitchel's Guide, and Thomas' Canadian Bee-keeper's Guide, all of which I have read, besides the five volumes of the AMERICAN BEE JOURNAL, all of which I have read with much interest. So you see that I am not entirely ignorant of the wants of a good hive.

Mr. Miller states, on page 186 of the BEE JOURNAL, Vol. 5, "You convey the idea that all that is required to obtain straight combs in the Diamond hive, is to level the hive, put in a swarm of bees and let them have their own way in building." This, with one addition, is correct; that is, to see that the frames are true *in the hive*. Now, "we speak that which we do know, and testify to that which we have seen," that if you will see that the frames are true in the hive, or not winding, and the hive is level, with the bees in it, they will build their combs straight in the Diamond Hive, without any other guides or division boards than the simple empty frames furnish. Of course, by the division board, which is tight-fitting and yet perfectly easy of removal, we can adapt the capacity of the hive to the size of the swarm; thus enabling a small swarm to send more workers to the field than if in a large hive without such division board; though its use is not necessary to secure straight combs.

Don't begin to cry up—"Stop thief!" and doubt the truthfulness of our Bennington colony statement. We have told you the truth, and if you wish to cross-examine the witness, I will make this offer: If you, or any of the readers of the Journal, in America or in Europe, will visit me and the Bennington colony, they shall be taken around among the bee-keepers, and have the chance of examining all the hives; and if they are not as we have stated, I will pay your fare here and back, and your expenses while here. We are five miles east of Ashley Station, on the Cleveland and Columbus Railroad, thirty-six miles north of Columbus. A hack runs every day to the station. Now, gentlemen, if you wish to cross-examine the witness to get the "*whole truth*," come on. You may have invented, five years ago, and used, hives with frames hung angling, and got crooked combs in them. I can show you hives of one man in this neighborhood that were filled last year, with frames hung angling, and have crooked combs; but they are not made like the frame of the Diamond Hive. They are placed two inches apart, and the bees were compelled to build crooked in them to keep the usual distance between the combs.

I said, in the April number, Vol. IV., of the BEE JOURNAL, that I invented the Diamond Hive in 1862, which is more than five years ago. You may have been the first inventor; but don't mix your testimony. Until otherwise proved, I claim to be the first inventor and patentee. We profess to be truthful people down here in Quakerdom; and if we are accused of false statements, we ask for investigation. You speak of the Michigan convention, and ask if I was there. I was, and received the first premium and diploma at the State Fair, over thirteen hives in competition—among which were the Langstroth, America, Buckeye, and Thomas' hives, by decision of as practical and disinterested a committee as there is in the United States. If you doubt my statement ask Prof. Cook, of the Agricultural College at Lansing, or Mr. J. H. Townly, or E. Rood, Esq. At the Bee Convention the majority of the committee were in favor of the Diamond Hive, if I mistake not; but the chairman was interested in territory for the Thomas Hive, and the committee did not agree. The chairman reported in favor of the Thomas Hive, (which, by the way, is a very good one in many respects.) The Secretary at first refused to put it into the minutes, on account of the disagreement; but after some discussion in the convention, it was allowed to go on the minutes, as I had been awarded the premium at the fair. These are the facts in the case.

Perhaps Mr. Miller lives as near Prof. Flanders as I do; so don't link one man's reputation with another's because you don't like him.

It is not a fact that we obtained straight combs in the frames by the use of comb-guides and division boards, as you accuse us; only such as are a part of the simple empty frame.

As far as Mr. Price's statements are concerned, I have simply to say, I wrote an answer to that, sending a copy to the AMERICAN BEE JOURNAL. I do not know why it was not published.*

A. V. CONKLIN.

Bennington, Ohio.

* The reply referred to never came to our hands, and of course could not be published.—ED.

Bees dislike any quick movements about their hives; more especially any motion which *jars* their combs.

[For the American Bee Journal.]

A Word of Explanation.

In reply to dozens of correspondents, in regard to my certificate in Dr. Conklin's Circular, I will say that said certificate was taken partly from the AMERICAN BEE JOURNAL and partly from private letters, and entirely disconnected from the several subjects. Thus putting words together answers the Doctor's purpose, no doubt, admirably. But in this same manner, I can prove by Scripture that the Doctor ought to commit suicide—"And he departed and went and hanged himself." "Go thou, and do likewise!" Now, no one can deny that this quotation is pretty near Scripture. The only question is, is it rightly put together?—I will say this much: I have consented to take one of the Diamond hives on trial; and the Doctor has forwarded one to me, together with the right to make and use, free of charge. I have had a favorable opinion of that form of hive—say nothing about the Doctor's fixtures. But I can tell its worth better after testing it.—I have also received one of Dr. J. Davis' Queen Nurseries, together with a right to use, &c., but have had no opportunity to test it, as I received it too late last fall.

I hear that other parties are using my name in order to sell their wares. According to this Gallup's name must be worth something to said parties. Now what I wish distinctly understood is this: whenever Gallup discovers anything in the bee line worthy of a certificate or recommendation, he is *the very man* that will not be afraid to say so, and that through the public press; and until he does so acknowledge anything worthy, you may take it for granted that the use of his name is unauthorized.

No man can well be a true man who is always seeking to know how far he can go towards a lie and yet not be technically unfaithful to the truth. This half permissive lie does not come up to my standard. All this kind of management, all this equivocation, all this dexterity in avoiding exact truth, does not exactly agree with my idea of manliness. E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Patent Hives.

An article in the March No. of the BEE JOURNAL ought perhaps to receive some notice from me. Mr. J. M. Worden, after describing a hive embracing the patented features of my hive, and claiming that he "has attained similar results" with Mr. Quinby in constructing a hive, and by such language leaving it to be inferred that he is the inventor of it; as he also says "it is and ever will be free from patent, so far as I am concerned," is ungenerous enough to use the following language:

"Let us all try and contribute our mite, that we may perfect a hive and a system of bee-keeping free to all, and cease to patronize *the cormorants that have for years plundered* the industry of the country. Cease to patronize patents, and they will soon cease to be the *disgusting nuisance* they now are, &c."

But few persons will agree with Mr. Worden that the bright array of eminent inventors of our country who have, by their labors and study, placed us in advance of all the world in science and art, have only been so many "cormorants, plundering the industry of the country," or "disgusting nuisances." No doubt he uttered this uncalled for denunciation in a fit of thoughtlessness and must be ashamed of it by this time, for a man of his intelligence must know that the industry of the country has been almost entirely built up by patented inventions, and most of the inventors have been inadequately rewarded for the labor and thought expended on their inventions. The "industry of the country" has the best end of the bargain. Does he suppose that one invention in ten would ever have been made, had the inventors expected nothing in return for it except the "greater happiness" he romantically supposes "a good and true man" feels in "being serviceable to his fellow-creatures without the hope of fee or reward?" Does he not know that without the kind of protection which our government throws around the work of a man's brains equally with the labor of his hands, and the property he acquires by his fortunate possession of wealth, that all important discoveries and inventions would be held as secrets and only sold under oaths and bonds, and that many of them would die with the inventors, as did the lost arts of the ancients? "The laborer is worthy of his hire," and brains have, in all ages, commanded greater wages than muscle, and justly so. "Cease to patronize" thought and genius, and they will soon cease to be expended on inventions, the "disgusting nuisances" friend Worden makes them out. Act on his theory and *practice* of laying hold of another man's property and claiming it as your own, and we return to

> "The good old rule, the simple plan,
> That he may take who has the power,
> And he may keep who can."

He says of his arrangement, "whether it necessarily conflicts with Mr. Adair's patent, I do not know." The description he gives of the hive embraces the most important of my claims. A part of the specification is as follows:

"The nature of my invention consists in forming the different chambers, apartments, and honey boxes of a bee hive of a series of vertical sections or rims, so fitted to each other, in sufficient number, as to form close boxes of the size required, &c." "The whole is enclosed by an outer case or box, &c." Each section is formed by nailing together four thin pieces of wood. For the brood chamber they are generally about one-half an inch in thickness, and for the honey boxes about half that thickness. They are all about one and a half inch wide, and of the proper length to make the sized box required. The upper piece and the lower project slightly beyond the other two pieces in front, and set back the same distance from the edge of the same in the rear, so as to form shoulders, so that when the sections are joined together they fit into each other to hold them in their proper places. A suf-

ficient number of such sections being so put together, a narrow wooden strip, or *its equivalent*, is nailed or screwed on the upper boxes, to hold the whole together firmly. The brood chamber is constructed in substantially the same manner, the proportions only being different."

The whole of the specifications would take up too much of your valuable room. I have quoted this part to show that the hive described by Mr. Worden is covered by my patent, and will only quote so much of my claims as covers the foregoing specifications.

"But what I do claim as new and desire to secure by letters patent, is—

1. The honey-box, constructed as described, &c.
2. The sections of the brood-chamber, constructed as described, &c."

The rest of the claims and specifications refer to things not embraced in Mr. Worden's description.

I have had considerable correspondence with Mr. Worden, and when he wrote to me that he had made a different arrangement of the honey-boxes, by placing them on the sides of the chamber, two months before his publication in the Journal, I wrote to him that I was using the hive in that form, but that my last and better arrangement placed the boxes at the back of the hive, and sent him a drawing and description of my side gathering hive. Even if the article was written before that, he had time enough to correct his assumption of originality; which I suppose he would have done had he thought of it, for I believe him to be an honorable gentleman, and bear him no malice.

He suggests one objection to the form of sections I use, that "bees would be liable to be crushed in closing them." This is imaginary, and he would not make it, if he had had more experience with them. I have used the various forms of movable frames, and in none of them is there as little danger of crushing bees as in my sections. The sections can be put together, even if the sides are covered with bees, without killing one, as you only have to press lightly against them with the section you are putting in, then draw it back a little, and they will all take the hint and get out of the way.

D. L. ADAIR.

Hawesville, Ky. March, 1870.

[For the American Bee Journal.]

Dimensions, Form, and Management of Hives.

In the BEE JOURNAL, Vol. 5, No. 3, page 60, Mr. Charles S. Paine asks Gallup a question, and you never knew Gallup to refuse to answer a question when asked civilly, or withhold his views on the subject. It has only not been answered before for lack of time. Mr. Paine, referring to two other writers, says—"neither of these gives any reason for their statements," respecting the size of hives. In some of the back numbers of the Journal, I gave this for one reason: That, under favorable circumstances, a good prolific queen would, in three weeks, occupy with brood every or nearly every square inch of comb in a hive containing two thousand cubic inches, and that consequently a hive of less capacity would restrict the breeding of the queen. A hive of one thousand seven hundred and twenty-eight cubic inches, or one cubic foot, is all that is required, if you give box-room—that is top boxes, and as soon as one set is partly filled raise them and insert another set under, and give free access to the boxes, which must be done if you expect the full benefit of surplus honey gathering and storing. But if the honey crop is cut off suddenly, (as is frequently the case,) while the combs below are entirely filled up brood (and a queen that will not occupy that amount of comb during the storing season, should be superseded,) the bees must be fed or starve. I have repeatedly had them entirely destitute, both in Canada and Wisconsin, in that size of hive; and then again, there would be seasons when they would do very well.

But here is another difficulty. It is almost impossible, in any locality where I have been, to prevent too much or over-swarming in a hive of that form and capacity, without a great deal of bother. It is not a particle of disadvantage in the form of hive I use, to have two frames on each side of the brood filled with honey in the body of the hive; and if not wanted for the bees, it is just as good surplus as it would be if stored in boxes, for if the queen does not breed in them there is never any pollen stored there than there is in boxes; and with that sized hive we are always safe.

There is another reason that I stated before, but will mention again. We almost always have a scarce time in June, both here and where I lived in Wisconsin, and I want honey enough in the brood chambers to last through that time, and keep up breeding to the full capacity of the queen. I like it much better than being compelled to feed; and if we have our hive well filled with brood at the time the basswood blooms, we are almost sure of a good crop. You will recollect that in 1868 the honey crop was cut off in this vicinity, on the 20th of July. My bees wintered well, but the hives were not near as full as I like to have them. If they had been, I should have had honey on hand in the hive, and it would have saved me all my feeding black swarms this season. As it was, I kept equalizing the stores, and when the old honey was gone in one hive it was gone in all. The consequence was, my Italians cut their own fodder, and the others had to be fed. Even black swarms did fairly in 1868, where they had access to buckwheat pasturage, and were in hives of the right dimensions and form.

It appears to me that if queens will occupy the whole two thousand cubic inches with brood, in one locality, they ought to do so in another, at certain seasons of the year.

ELISHA GALLUP.

Osage, Iowa.

The quantity of pollen that is collected in the course of a season, by the diligence of the bees, has been estimated at from sixty to seventy pounds.—SCHUCKARD.

A *cute* American naturalist has observed that the bee as it flies from the hive is oddly enough, going to *hum*.

[For the American Bee Journal.]

About Uncapping.

MR. EDITOR:—Your correspondent, I. F. Tillinghast, in the March No. of the BEE JOURNAL, complains of having had a good deal of trouble in uncapping combs of honey, and begs information of any who may have had better success in the matter. I took out several hundred pounds of honey with my emptier last fall, without finding any difficulty in uncapping; and if my experience will help your correspondent, I will gladly tell him how I did it.

I think his difficulties in *uncapping* must have arisen from the fact that he neglected to keep his knife *warm* while performing the operation. If this precaution is well observed, almost any good-sized knife will answer—although some are better than others. Sometimes I use a butcher knife; at others, an ordinary dinner or tea knife.

The longer and thinner the blade is, and the sharper the edge, the better. My favorite instrument is a *pallet knife*, about ten inches long, sharpened on both edges, and bent near the handle like a mason's trowel. But the knife, of whatever kind, must be kept *warm*.

In uncapping I usually employ *two* knives. One I keep in a vessel of hot water, while using the other. When the knife in use becomes too cold to work nicely, I return it to the vessel, take out the other, pass it through a cloth to dry and cleanse it, and proceed as before. In this way combs can be uncapped very rapidly and so smoothly that they will not look as if "mice had done it." But if the *uncapping* were ever so nicely and effectually accomplished, I should still be very unwilling to undertake to empty combs that had stood any length of time, without bees, in a cold room, as late in the season as October. I emptied combs in October last; but it was done immediately after the bees had been taken from the hives. In a few instances the combs stood some time, but they were kept in a warm room, not however "behind the stove!"

MRS. M. D. MINER.

Glenville, N. Y., March 21, 1870.

To Stupefy Bees.

Put two teaspoonsful of chloroform into a cup; soak a bit of rag in it; then put the rag into the box or hive, closing the entrance. The bees will almost immediately begin to drop, and in less than ten minutes every bee will be stupefied. They will recover in about half an hour; but will not fully recover their activity till next morning.

As, in April, brood is rapidly maturing in the hives, there is a largely increased demand for honey, and great care should be taken to prevent the bees from suffering for want of food.—*Langstroth.*

Bees seldom swarm if honey is not so abundant that they can gather more than they need for immediate consumption.

[For the American Bee Journal.]

Uncapping Cells.

I was interested in reading the trials of a correspondent in uncapping honey for his machine. I use a knife which I procured from Mr. Langstroth, with my first machine. It is thin, like a bread or shoe knife, eight or ten inches long. The shank is bent, so that the handle sets off about an inch, on a line parallel with the blade. One man can uncap nearly as fast as another can extract the honey with the machine. I keep the knife sharp, and have never tried heating or in any other way preparing it.

In the fall, or winter, the combs must be kept in a warm room a few hours, till they have become warmed through. In the summer it makes no perceptible difference whether he honey is extracted the day it is removed from the hive, or not. Any one who is going to get out honey every day or two, in the summer, will find it a great convenience to have a complete can for the rack to revolve in, and a place near the bottom for drawing off the honey. A cover of cotton cloth may then be thrown over the top, or tied on, thus completely excluding all flies and bees. Mine holds fifty pounds under the rack.

Caution should be used, or too much honey may be removed from the hive, for the good of the swarm. It is better to leave honey enough, than to remove it, and depend on feeding.

J. L. HUBBARD.

Bucksburg, N. J., March, 1870.

[For the American Bee Journal.]

Honey Knives.

For the benefit of Mr. I. F. Tillinghast and "whom it may concern," I will give a description of my honey knives.

No. 1 is made of a piece of an old woodsaw. The blade is very thin and springy, sixteen inches long, exclusive of the handle. The teeth are removed smoothly. One side ground to an edge; end square and also ground to an edge. The other end is mounted to a flat wooden handle, fastened on with four hickory pins, instead of iron rivets. This knife gives me entire satisfaction in slicing off unequalities on combs, uncapping cells, &c. Its length and elasticity enable me to use it on crooked combs.

No. 2 is like No. 1, only the blade is thick and firm; good for loosening old combs on box hives when transferring, and otherwise where No. 1 would be too limber.

No. 3 is a thin-bladed bread knife, eight inches long, bought at a hardware store. This I use about honey boxes, and wherever it is more convenient than No. 1.

No. 4 is a thin short knife, to slice up combs, and to cut it and fit in frames when transferring.

The edge on honey knives should not be smooth, but rather gritty, such as a good scythe stone will make.

With the above knives I find myself sufficiently armed and equipped for all emergencies.

HENRY CRIST.

Lake P. O., Stark Co., Ohio,
March 25, 1870.

[For the American Bee Journal.]

Hives, Transferring, &c.

MR. EDITOR:—Your correspondent, H. C. Durborow, wishes me to explain how we make our division boards so that bees can get into the boxes, and how we make the entrances to the boxes. Last season was the first that we used the hive to which he has reference, and we have not as yet had boxes filled. We prefer the use of extra frames, which we empty with the "machine."

We intend to try boxes on some of our hives this season, however; and have several plans for accomplishing the desired object.

Our frames run crossways of the hive, and of course the boxes are to be put against the sides of the combs. I do not think it necessary to retain the division board, when boxes are used. By leaving an opening in the end of each box, the division board can be removed, and the ends of the boxes supply its place. If boxes were to be placed against the ends of the frames, I would leave the end of each box entirely open. The easier the access to the boxes, the better; but when they are placed against the combs with ends open, the bees are apt to lengthen the cells of the comb so that it will project into the boxes, instead of starting new combs in them. I have no trouble with queens laying eggs in them.

He also asks—"Do you have a honey board on top of your frames, during the summer?"

We have as yet used no honey board on these hives, but think that the use of one would be an improvement. If made out of slats, so as to fit over any number of frames, it could be used to better advantage.

In regard to the best time for transferring bees and combs to frame hives, there is much diversity of opinion; some preferring to perform the operation before, and some after, swarming. I have tried both and think if I had a dozen swarms to transfer this spring, I should do it as early in the season, as honey becomes plentiful enough to insure the bees against consuming more than they could gather.

Do not try to make two swarms of one, when transferring, even though you think there are bees enough to warrant it. Better wait until they get their combs all filled with honey and brood, before making the division.

For holding the combs in place in the frames, when transferring, until fastened by the bees, we use clasps made of wire. Two to each comb, passing around the frame from top to bottom, will hold them securely, occupy but little room, and are easily removed.

I. F. TILLINGHAST.

Factoryville, Pa., March 14.

[For the American Bee Journal.]

My Views of the Italian Bees.

MR. EDITOR:—It may perhaps be very easily accounted for why we still find some persons who claim to be intelligent bee-keepers, making the assertion that the Italian bees are no better in any respect than the native or black bees. The fact is, they are ignorant of the matter in question. In 1867, I purchased one Italian queen, paying ten dollars for her in the fall of the year, as late as the first of November. In January her stock began to show, and by the first of May there was not one black bee to be found in the hive. When I considered it time, I swarmed them; sometime in June. About the last of August they threw off a very large swarm. All wintered finely.

The past season was one of the poorest for bees in our section, that I ever knew. I had wintered one hundred and fifteen swarms. In the spring of 1869 they were in the best condition possible. On the first of April many of my stocks were in fair condition for dividing, plenty of honey and bees; but by the first of May they were on the decrease; on the first of June growing worse, and in July they were in a starving condition. No swarms from my native bees. I swarmed most of my Italians artificially; some of them twice. Young swarms filled their hives. Old stocks had plenty of honey in July, and were gathering it very fast when my native bees had to be fed. I can prove by reliable persons that on several occasions one of my Italian stocks was working and flying more briskly than fifty stocks of my black bees. Of the natives not one stock in twenty has honey enough to carry them through the winter without feeding. I do not consider Oswego county a first-rate section for bees.

I was not aware that bees were such short-lived insects. Very likely in a good season, they would live longer; but what say you, bee-men, to this fact. The last of August, I introduced an Italian queen in a very populous colony of native bees, and in forty days from the time I introduced her not a black bee remained in the hive, which was then well stocked with Italians.

I have about fifteen stocks of Italian bees, and intend to Italianize all that I succeed in wintering. I do not wish to keep a swarm that is not pure Italian. After keeping bees thirty-five years and experimenting with them, I am willing to risk the change. The Italians are more quiet to handle, better workers, less inclined to rob, and are beauties. I am satisfied with them. The hybrids are different in some respects. They are good workers, but somewhat ill-tempered and troublesome to handle.

I have just heard a singular story from my native State, Massachusetts. An old neighbor was at our place, and speaking of Italian bees, said—"We don't exactly like the Italians, as some of our bees were robbed by them last fall." "Were they owned near you?" "No, not nearer than six miles." I thought probably they were owned by Mr. Cary or Mr. Alley. If either of these gentlemen has bees that will *go six miles* after honey, I would like to engage fifty queens, as that goes far beyond my bee experience.

Fulton, N. Y. W. C. NEWTON.

Bees are always more irascible when their hives are disturbed after it is dark; and as they cannot see where to fly, they will alight on the person of the bee-keeper, who will be almost sure to be stung.—*Langstroth.*

[For the American Bee Journal.]

A Queer Notion, and Bronze Bees.

MR. EDITOR:—It is not to be expected that we shall all see or think alike. Although I am forty-five years of age, and have made bee-keeping a specialty for over thirty-five years, I seldom dispute with any person about it. But just look at this notion, coming from a man older than myself. In a conversation with several bee-men, one inquired of me whether I had ever seen a bee unload or remove the pollen from its legs. I told him I had, and that it was done thus: the bee passes over the comb or a portion of it, till she finds a cell that seems to suit; she then thrusts in both legs containing these little pellets, taking them off in a very short time, with the next pair of legs. "No such thing," says the man, "it is thus—the bee coming into the hive, commences to run, and runs until she gets up sufficient heat by friction to melt the pollen; then the other bees take it off for her!" I considered that he had told me all he knew about bees, and walked quietly away, as he was too wondrous wise for me.

I will mention what to me is a curiosity. I have a colony of black bees—that is the queen is a native or black; yet about one-fifth of her bees are entirely *bronze-colored*, wings, legs, all entire, and about one-third of her drones are of the same color. The other bees and the drones are altogether like common bees, not one showing any mark of Italian blood. I intended last summer to send some workers and drones to the BEE JOURNAL, but forgot it. If the entire colony was of the bronze order, it would be a prize in my estimation.

In my next I propose giving my experience in wintering and feeding bees, as I have wintered some on their summer stands, some in the cellar, some in a chamber in a building built for the purpose, and some buried in the ground.

Fulton, N. Y. W. C. NEWTON.

[For the American Bee Journal.]

Preserving removed Queen, when Italianizing Stocks.

On several occasions last season, while Italianizing stocks, I preserved some of my removed queens in the following manner: I would select a stock of bees so strong in numbers that the temporary confinement of its queen would be no material loss; cage the queen, and suspend the cage containing her between two combs. After leaving her thus for twenty-four hours, I would suspend by her side, two or three more cages, each containing a removed queen—leaving three or four inches of space between the several cages. The bees would now feed all the queens without exception. After the queen belonging to the hive had been caged seven days, I released her, first destroying all the queen cells, if any had been started. The released queen would immediately resume her duties, while the bees would continue to feed the other queens two or three weeks longer; but in neither case over thirty days from first to last.

In case of any emergency, I found these preserved queens very convenient to use. As my first experiment proved entirely satisfactory, I made all the rest in like manner, with the same results. I cannot say therefore what variations, or whether any, can be successfully made; and although successful in every trial, I would as yet hesitate to risk the life of a valuable queen on so slender a thread.* HENRY CRIST.

Lake P. O., Stark co., Ohio,
March 9, 1870.

* We have occasionally preserved common queens in this manner after removal, till their successors were accepted and had begun to lay eggs; in no case longer, however, than eighteen or twenty days.—ED.

[For the American Bee Journal.]

Correction.

In my inquiries on page 167, Vol. V., No. 8, I should not have said that my bees died and (afterwards) that I removed them to the house cellar. But that, having almost a passion for bees and honey; and believing that one may learn so to manage bees that it will be as profitable as other employments, I purchased several colonies, old and new, in box hives, at four dollars each, and transferred them; also a flour barrel containing seven (7) fresh swarms, most of them very large, being from box hives holding two bushels and over. For these latter I paid eight dollars (not $30), and made five colonies of them, after losing about a bushel by flight.

I put in sixteen colonies, as before. Fearing the old difficulty might have been caused or aggravated by damp air, I removed them to the house cellar, &c.

I am troubled, as friend Grimm says he is (though I cannot see it in his case), with what I call a "Yankee propensity" to occupy too much time with details and circumstances. In guarding against this "besetting sin," I cut my subject too close, like the negro who having leave to cut off his master's dog's tail as close as he chose, cut off his head, and after a moment's reflection, said—"I bleve I've spiled bofe pieces. That's cut cidedly too close to his ears."

My bees were weighed, and the first swarm died the second of February and not September, as the printer would have me say.

The last numbers of the BEE JOURNAL are unusually full of interesting and instructive matter, and must commend themselves to every bee-keeper who has enterprise enough to stand the remotest chance of success.

West Georgia, Vt. O. C. WAIT.

[For the American Bee Journal.]

Inquiry.

Do the same rules apply to introducing queens in a nucleus hive as in a full stock? Would it not be best, on receiving a queen, to put her in a nucleus hive until the combs are filled with brood, and then transfer her to a full stock—that is, if more queens are wanted? Will some of my bee-keeping friends answer?

H. L.

Lewistown, Me., March 25, 1870.

[For the American Bee Journal.]

The Honey Season of 1869, in New York.

When I look back over the year 1869, I find no parallel to it, in my bee experience of twenty-three years.

The winter of 1868–69, was very favorable for wintering bees, in this section; and going into winter quarters in good condition, few bees were lost, and they came out in splendid order.

Out of some ninety stocks that I left on their summer stands, without even examining them in the fall, only three died—one for want of honey; the other two, being second and third swarms doubled, had "dissolved partnership" within two or three days after being hived; but the "retiring partner" took all the queens, and thus left the home firm in no condition to increase their stock in trade, which consequently failed in winter.

The spring commenced fine, and from the 1st to the 10th of May, the prospects never looked brighter. Most of the hives that were not full of comb, commenced lengthening dowr. their combs and prepare for swarming; and we began to feel quite nervous as to how we were to get all the hives ready for the expected new swarms. But our troubles in this direction soon ceased, turning our minds to the consideration of how we should keep our bees (with the monstrous broods they were then nursing) from actual starvation. But the bees seemed to understand the situation; for the drones, which had began to fly pretty briskly, were by the workers, made to fly a little more briskly than they desired; and when they left their hives, each with a worker on his back, they were served with peremptory orders not to return; and some of the drone brood was mercilessly torn from the cells before it was hatched. And by the way, this drone slaughter continued during the whole summer; and I think there was scarcely a day in the whole season, but there was more or less "butchering" done. The destroying of drones in May, is nothing very uncommon, only indicating a scarcity of honey, and swarming for that year, if there be any at all, will be late; but to have it continue all summer, is new to me.

But, to return to the adverse change in the fore part of May. Our courage did not fail; for we hoped that the fruit (especially the apple) blossoms would bring a favorable turn. But, alas, the apple blossoms came with the dandelions and raspberries in succession, yet no improvement. Still, as the prospect for white clover was unusually good, we kept up courage, thinking of the "honeyed future," and that perhaps it made little difference whether we got the honey before the swarms, or the swarms before the honey.

The white clover came in abundance, but not the honey! Many swarms came, and with them came starvation! They seemed to swarm more out of spite, than anything else; the bees seeming determined to preserve the queen cells, and the old queen as determined to destroy them. Unable to succeed in this she appeared bound to quit, though she should starve. There was nothing of the old normal orderly swarming this year. It has been a sort of hurly-burly, pell-mell kind of business. I have had as many as six swarms on the wing at a time, and before they got settled, they would all be in one pile, and every queen *pinned*—that is, enveloped by a knot of bees about as large as a hen's egg. I tried putting one of the queens so knotted into a hive, and then adding bees enough for a good swarm; and for half an hour or so you would think it was going to be all well with them; when perhaps the next minute they would all swarm out—some returning to the hives from which they came, and the rest going into the common stock pile again, ready to be divided up anew. By keeping on dividing, I would succeed in making two or three good stocks out of half a dozen.

The clover blossoms continued abundant through June, but all the honey gathered therefrom was so thin, that they would evaporate and consume during the night the pound or two which they had garnered during the day. On opening hives, as I did more or less of them daily, I did not see a cell of new sealed honey till the 2d day of July.

July brought very little improvement. Still we did not despair, thinking we stood a chance yet in buckwheat and fall flowers. Our hearts were cheered by buckwheat commencing with moderate bloom, which lasted five or six days, and induced the bees to put in a rousing amount of brood; in the maturing of which, they not only consumed all they had garnered from the buckwheat, but many of them also consumed all they had previously laid up. By the middle of September they had not a pound of honey left.

Now hope expired; and the question came up what shall we do? Shall we let our bees go by the board, or make an effort to save them? But our troubles did not end here. The good housewives began to beset us in droves, with their lugubrious complaints that, whenever they undertook to make preserves, sweet pickles, pies, or anything sweet, my bees pounced on them and so monopolized their supplies that they were forced to surrender. The grocery men, too, joined in the chorus, saying—"Stratton (for poor Stratton has to bear all the blame here), your bees are carrying off all our sugar;" and the *blessings* we got were anything but *honey*. Feeling pricked in conscience, all the plea we could make was—"*poor starving bees!*" They replied we ought to feed them, and thus keep them at home. In order to gratify their useless whim, and feeling that we might sometime regret we had not made an effort to save them, we commenced to feed extensively with sugar syrup. This we continued till about the middle of October, when the weather became too cold, and they would take no more. A good part of what they did take remained unsealed. But that was not the worst of it. So many of the bees had been *preserved*, *pickled*, or *burned*, that there was not a swarm which had a fair number left to begin winter with. Many of them had not a quart of bees, and I do not think that they averaged over two quarts to the hive. Consequently the first severe cold finished some of them; and though the winter has been mild, yet changes have been so numerous and great, that there has been a continual drain on their scanty stores and numbers; for there has scarcely been a week that they

were not tempted to leave their hives, and always more or less fail to return. I dread to have spring come, when I shall have to witness the desolation.

WM. M. STRATTON.

West Troy, N. Y., Feb. 21, 1870.

P. S.—I always feel more interested in "facts and figures" than in anything else, and the more of them the better, and I think that J. H. Townley, on page 166 of the February Journal, has imitated the deacon in "spreading" on Judge Chapman's titles. I judge that in a revised edition he will be willing to reduce his 2,163 to the square foot by 2,155, leaving *eight* to the foot; and borrow a few bees to finish out with. But do not be weary in well doing, Mr. Townley, for the idea will lead to a fine train of thought respecting bee pasturage.

W. M. S.

[For the American Bee Journal.]

Wintering Bees.

In nearly every number of the BEE JOURNAL there appear several articles under the above or a similar heading. Some reporting their success, others their mishaps; some advising one method, and some another; some experimenting, sanguine of success; others mourning over their failures. I may be vain, and possibly conceited; but I cannot help smiling at this jargon of the doctors of apiculture, while my own bees are quietly sleeping away the long winter months, giving me no anxiety of mind, nor causing the slightest trouble. I put my bees into winter quarters, and go about my business, giving them no further thought till the bright sunny days of spring, when I return them to their stands full of life and vigor. If "NOVICE" had expended two hundred dollars in an underground room, similar to the one described by myself in the AMERICAN BEE JOURNAL, he would have no occasion to open the door at night or reconstruct ten years hence.

J. H. THOMAS.

Brooklin, Ontario.

[For the American Bee Journal.]

A Few Inquiries.

MR. EDITOR:—I would like to ask friend Gallup a few questions through your Journal, as he is well posted on bee questions.

After taking out bees in the spring, would you keep the top of the hive perfectly tight and close, so as to keep all the animal heat in, to induce breeding more rapidly?

In case you have a light swarm of bees, would you use a division board and keep the space from being large, so as to create more heat?

Where do you have ventilation to your hive in summer? Do you have more of it than is given at the entrance?

Please reply, and oblige, JOEL DAYTON.

Decorah, Iowa.

[For the American Bee Journal.]

Bees in New Jersey.

Well, Mr. Editor, I've removed, bag and baggage, bees and bee-hives, and am going to try bee-keeping, here on the sands in the pine region of New Jersey. I hope to be able to give you a good account in the future. We have light land which is favorable for the production of honey, if covered with the right kind of vegetation. It has been my experience that bees work more than four times as much on clover growing on dry sandy or gravelly land, than on heavy clay or wet land. Some of the land here is too light, and much of it is not yet covered with the right kind of vegetation, as it is only four years since this section was opened for settlement. Most of the land was owned in large tracts; only an occasional farm having been cleared.

It may be said in our favor that we have a long season; and it will be seen, on looking at a map showing the isothermal lines, that we have a climate similar to that of some of the Southern States. We can raise sweet potatoes profitably; also peanuts, and some other southern productions. Fruit growing is the main business here, which will give an abundance of early blossoms; and I fancy that the raspberry will prove of value for its honey. Clover is not yet abundant, though increasing. We have also willow, locust and cherry; but I do not know of how much value these will be until I observe them one or two seasons. Buckwheat is raised, and is of value to the bees. I shall try melilot, mustard, borage and alsike clover, and if you can offer any suggestions of value to me, they would be thankfully received.

Appearances indicate that we shall have a long continuance of blossoms, though not very abundant much of the time. Whortleberries grow wild here in great abundance. Sometimes a hundred bushels a day are sent from this place to New York, for a week at a time. Some of the natives think the bees get a good deal of honey from the whortleberry blossoms; some think they do not; and others do not know what they work on except buckwheat.

Bee-keeping is at a low tide here, as is (or rather was) every kind of industry amongst the isolated rural population. The colony of fruit growers establishing themselves here have given a different *look* to this hitherto uninviting field.

Last summer I hived a small swarm, and in a few days found they were queenless, without a particle of brood. A few days later, on examining them, I found the work of a fertile worker or workers. As they had a young queen when hived, it would seem that this worker must have become fertile after being fully grown. I believe this to be the case generally, and that they need no previous preparation, such as being laid at the side of a queen cell, and getting some queen's food by mistake. J. L. HUBBARD.

Bricksburg, N. J., March, 1870.

Colonies too feeble in numbers in the spring should be gradually reinforced by inserting maturing brood taken from strong colonies.

[For the American Bee Journal.]

A Simple Bee-Feeder.

Having used a feeder for two seasons past, made somewhat on the same principle as that described by NOVICE in the April BEE JOURNAL, I send a description of it, thinking it may be of use to some of your readers, as it is even more simple and cheaper than his.

Have a tin tube made, open at both ends, one inch in diameter at the bottom and one and three-eighths at the top, and three inches long. Now put two thicknesses of rather close woven linen or cotton over the smaller end; these should be about four inches square. Then push these (the tube with the cloth on them) down through one of the holes in the honey-board, until they will not go any further, and you will have a feeder which will hold plenty of food, for spring feeding, at a cost of two cents. To use it, pour your honey or syrup in the top, and it will drain through the cloth, one or two drops at a time, and be taken off clean by the bees, even if the weather is quite cool, as they need not leave the cluster to get at it. If you wish to feed heavily, you can put a feeder in each hole in the honey-board, making six to the hive.

Will NOVICE please consider his hand *warmly* shaken for what he says about OUR Journal, in the same article. D. M. WORTHINGTON.

Elkridge, Md., April 9, 1870.

[For the American Bee Journal]

Foulbrood.

I had supposed that my article on foulbrood would wake up Mr. Quinby, or some one else. Had my colonies all been good full ones in the spring, or even in the month of June, I might have done as Mr. Quinby has advised on page 212 of "Mysteries of Bee-keeping;" but as my stocks were very weak—and all colonies would naturally be when diseased by foulbrood—I found it best to destroy hives and all.

Mr. Quinby desires to know if it was proper to jump at conclusions at first sight. Perhaps it was not; but then my experience for the next few months satisfied me that I was right. When it was my opinion that that was the trouble with the bees, why should I not call it foulbrood at first sight? I was no better satisfied one year later that my bees were foulbroody, than I was the first time that I detected that peculiar smell.

I think I missed it only in one thing, and that was by not destroying the two hives that I had purchased, as soon as I discovered that they were diseased. I would then have been only forty dollars out of pocket, instead of two hundred, as I was one year later.

If ever I have another case, I shall destroy hives, bees and all, at once; for I *know* this to be a *sure* and safe remedy. Mr. Quinby says—"a colony badly diseased in the fall is not in a good condition for winter. Such colonies at this season might as well be destroyed." And so I thought. Consequently I got rid of the bees, disease and all, and made quick work of it.

When but few colonies are diseased, why not destroy them at once, and have done with it? Of what use is it for any bee-keeper to experiment with this disease, when all who have been troubled with it meet with the same success, and know that the whole thing must be destroyed, sooner or later.

To any man who has read all or nearly all that has been written on the subject of bee-culture, and has had as many years experience with bees as I have had, and cannot tell at first sight when his bees are affected with foulbrood, my advice is to give up the business, as he will always have to depend upon what others tell him, and can never succeed, and ought not.

If any of the readers of the JOURNAL are troubled with foulbrood, let them test Mr. Quinby's remedy and then mine. I believe that nine out of every ten bee-keepers who will try both remedies, will wish they had done as I did in the first place.

H. ALLEY.

Wenham, Mass.

[For the American Bee Journal.]

Bee-keepers Hidebound, and Bee-keepers Liberal.

MR. EDITOR:—I am a careful reader of your valuable Journal. I long to have its numbers come; and would wish it to come weekly, instead of monthly. There is perhaps no one who takes a greater interest in bees than I do, and consequently all the information given by a host of correspondents of such eminent apiarians as grace the columns of your Journal, is duly appreciated. The writers belong to that class who are liberal and useful; who are not afraid to let their light shine. Their long and varied experience is duly regarded by all. There is, however, another class who are more narrow-minded and bigoted. Their selfishness precludes them from going into public print, except when they have some miserable make-shift, on which they have obtained a patent, and which they wish to puff into notice; or when other and more liberal men make improvements and publish them to the world, then they will rush forth like dogs with sore heads, growling and snapping at everybody, although there may be no infringement of their rights or claims. If all bee-keepers were as selfish and impotent, little knowledge indeed would we have. If every little improvement, fancied or real, would have to be patented, and all information withheld and hoarded up for a future volume, to be published for their benefit, little if any good would be the result. I do not discard books, neither do I undervalue their use; but this is a progressive age, and books may soon get behind the times. The only remedy is in a Journal. Let all good men rally to the work. Let all who take an interest in bee-keeping send in their communications; let bee-keeping be made co-operative, let all mutually help each other, and raise the standard of bee-keeping to what it ought to be and can be, even if the editor should have to enlarge his Journal again, let it be so. Let each subscriber procure one additional name to "the roll of honor," and all will go well. Let us not follow

the example of a few of our bee-keeping friends, who keep all their experiments and the results locked up in their own breasts, to be there hoarded like the gold of the miser, and finally lost to the world. Such men are a discredit to themselves and to the community in which they live. I am only a beginner, and consequently have as yet nothing to do but learn. If, however, anything interesting occurs I will cheerfully report it.

Gebharts, Pa. W. BAKER.

[For the American Bee Journal.]

Soil for Bees.

MR. EDITOR:—We want more of the experience of bee-keepers on the quality of soil as regards the yield of honey. (See BEE JOURNAL for March, page 179.)

Alsike clover, grown on reclaimed wet meadow soil, of course it was rich land, as it yielded no honey. Page 183. Quality of soil for beekeeping. E. Gallup on manuring the clover pasture and currant bushes to increase the yield of honey.

Bees fly over fields of buckwheat to others beyond. It may be, in that case, that the flowers were not of the same age, or the soil alike. We have seen stock and bees pass over low, rich lands, to higher, dry and light soils, to feed on clover; the season being wet and the growth of the plants large.

In June, 1868, we saw at Sterling, Ill., a field of clover, on a large portion of which the cattle refused to graze. Our attention was called to the curious case by Mr. Bressler. Will he please give the readers of the Journal the cause of the preference given by the cattle to a part of the field to the exclusion of the other part?

J. M. MARVIN.

St. Charles, Ill.

[For the American Bee Journal.]

Transferring Bees.

Several persons have asked me *when* to transfer bees, and *how* to transfer them. When to transfer them depends somewhat on circumstances. If I had a small swarm in a large hive, I should transfer early in spring, as my hive has a small frame; because I could then get them in better shape to control the animal heat, and thus cause more rapid breeding. But to transfer into another hive of as bad shape, or even worse than the original, there would be nothing gained by transferring early; it might, in fact, be an actual damage. The best time for such therefore is near the swarming time, or just before; say, as soon as the hive is populous, and when they are gathering honey so that they can build comb, repair damages rapidly, &c. If transferred at such a time, it will put them back only a trifle. In fact, I have frequently transferred, when I thought it actually set them ahead. I have transferred at almost all seasons except winter; but in all cases I knew what my object was, and understood the business.

Now for the *modus operandi*. In the first place, we want one hive all ready, and a dish full of small sized wooden pins of various lenghts from one to three inches. Then we want our frames with from one to three holes bored through each side, bottom, and top. These holes are to be bored with a small sized gimlet or bit, or punched with large sized brad awl. Now the pins must be made enough smaller than the holes to be pushed through easily with the fingers into the edges of the comb, because we may want to take these pins out after the bees have permanently fastened the comb in place. The next performance is to drum out the bees into a box, and drum them out thoroughly. Now set the box on the old stand, and split open the old board hive and remove the combs, one at a time, and transfer or fit them into your frames. To avoid robbers this performance should be done in a room or shop, with all the windows darkened but one. As fast as a comb is cut out of the old box, gum, or log (you want a cloth folded several thicknesses and laid on a bench, stand, or table, to lay your comb on, so as not to injure the brood or sealed honey) lay it on this cloth; place your frame on the comb, and mark it, so as to cut the comb a little larger than the frame; crowd the frame down over the edges of the comb, and pin it in its place. Then hang it in the place in the hive and serve another in the same way, until all are transferred. Place your brood all together in the same relative position that the queen would place it in, and not a comb filled with honey between two filled with brood. With the first swarm I transferred, I used the sticks or splints tied at top and bottom, as recommended in the bee-books; but that the only one. As soon as your comb is all transferred place the hive on the old stand, and hive your bees into it. Mr. Adair, in the Annals of Bee-culture, gives this method; but I did not learn it from him; neither did he learn it from me. Your pins can be taken out, after the comb is fastened by the bees. E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

Italian Queens.

Mr. Gallup has mentioned several times, in the BEE JOURNAL, that he purchased some Italian queens of an Eastern queen raiser that were not very prolific, short-lived, &c. I wish to inform the readers of the Journal that those queens were not purchased of me; and I wish to say, further, that I warrant all my queens to be *fertile*, *prolific* and *pure*, and guarantee to give satisfaction in all cases.

I make it a practice every year to purchase several queens of the best queen breeders and importers in this country, in order to avoid in and in breeding; and I do not allow *drones* to mature from those queens which I use to rear other queens from. I do not ship queens from my apiary until they have laid several hundred eggs. All the queens that do not commence to deposit eggs within forty-eight hours after being fertilized, are rejected. H. ALLEY.

Wenham, Mass.

THE AMERICAN BEE JOURNAL.

WASHINGTON, MAY, 1870.

☞ We give in this number a translation of that portion of the proceedings of the Nuremburg Convention of German Bee-keepers, which relates to the introduction of queen bees to queenless or deprived colonies, and will interest those of our friends who purpose procuring Italian queens for their apiaries this season. Also, the remarks on the requisites for producing early swarms, made by various members of that Convention on the ensuing day.—On perusing those articles it will no doubt strike the reader, as it struck us, that fully as great a diversity of opinion and practice prevails among the German "Imker," as among the American bee-keepers, though the former have had the topics much longer under consideration.

☞ The reports from Mr. Argo and Novice, of their "progress" respectively, during the past year, reached us almost simultaneously, though too late for our present number; as we regretted to find after making strenuous efforts to have them inserted. They will appear in our next, together with several other communications from old correspondents for which we expected to have room—the whole being already in type.

If queen cells be discovered in a hive having a fertile queen recently introduced and apparently accepted, they should not be destroyed, but the queen should be immediately removed, caged, and given to some queenless or deprived colony, or to a newly formed nucleus.—In such case there is usually an antagonistic party formed among the workers, bent on superseding the queen, and she is certain to be killed by them, sooner or later, if allowed to remain in the hive, even after all the queen cells have been destroyed.

Those who still use straw or box hives with fixed combs can, by the following method, prevent after swarming when a swarm has issued or been drummed out of a hive. On the day after teeting is first heard drum out another swarm, hive it, and set it at the side of or on the parent hive. In the ensuing night all the supernumerary queens will be destroyed and cast out, and the one selected and retained will in due time become fertile. Most of the bees of the driven swarm will gradually leave and return to their old home, even after their young queen has begun to lay. When her companions have for the most part forsaken her, this queen may be substituted for the one which accompanied the first swarm, and the old queen thus got rid of.

Mr. Uhle, of Roverido, in the Italian portion of Switzerland, whose advertisement appears in another column, was formerly Superintendent of Mr. Mona's apiarian Institute in Italy, and is known as a well-qualified bee-keeper.

Beer Law and Bee Law.

☞ In a recent case in the Circuit Court of Baltimore County, (Md.,) the Court held that—

"The defendant has the same right to sell *Tonic Beer* as the complainant has. But the defendant must not sell his Tonic Beer under such colors and representations as to induce the public to suppose that his Tonic Beer is the Tonic Beer of the complainant. That would be an imposition and a fraud on the complainant."—The Court accordingly granted a perpetual injunction, restraining the defendant from selling his Tonic Beer under false colors or pretences.

This being declared to be beer law, applicable as the Court said alike to Tonic Beer and "Day's Blacking or Rodger's Cutlery," we would kindly suggest to certain piratical parties—who boast that they are growing fat on the profits of practises thus emphatically denounced as an *imposition* and a *fraud*—to ask themselves quietly some cool evening, whether the same principle does not extend to matters coming under and embraced by what, dropping a letter, may be termed *bee* law?

We have received from the Hon. Horace Capron, Commissioner of Agriculture, a package of choice vegetable and flower seeds, for trial.

ERRATUM.—The board for the "ventilating button." of Mr. Crist, described on page 220 of our last number, should be three inches and seven-eighths (3⅞) long, and not three inches only, as there stated.

Correspondence of the Bee Journal.

EAST HARDWICK, VT., March 14, 1870.—Our winters here are very long and severe. Often we cannot get our bees out from their winter depositories until the middle or the last of April; and if not dead then, they are often very much reduced in numbers, from various causes. We have an abundance of dandelion, white clover, and raspberries, which are our main dependence. With strong stocks in the spring, we can get some surplus.—J. D. GOODRICH.

NEWBURYPORT, MASS., March 14.—The communication of the 3d of January, which I addressed to you, on the subject of my first experience with bees, was done without premeditation, or even a thought of its finding a place in the columns of your invaluable BEE JOURNAL. But as I wished to communicate about some other matter, I thought it might not be out of place to give, in brief, a statement of my bees, with others in general in this locality.

Assuming no selfish bigotry, simply claiming

square honorable dealings in all my business transactions, I did so without prejudice or partiality. But it seems friend Alley is a little sensitive on this point, and with one sweeping remark contradicts the following statements: "I took them to the county fair and there obtained the first premium of four dollars. There were three or four old bee-keepers present with their experience and new style of hives, and friend Alley with the rest. All said that their bees did nothing this year." Now, if what I said was false; or if my personal character for veracity were as well known to the readers of the Journal as it is in the city of my adoption, perhaps I might forbear; but, with your permission, I would like to examine the statements in question and see how far it was from being correct.

First. "I took them to the county fair and there obtained the first premium of four dollars." That I took my bees to the fair is too patent for any to deny, although it is a part of the statement which friend Alley says is far from being correct. That I received four dollars is also true, which I can prove by the City Treasurer, who paid me the money. That it was not the first premium is a quibble which I care nothing about, as it was the largest sum and I got the money. Two of the trustees say it is the same thing but of a different class. The discrepancy in the two statements may require a little explanation. Immediately after our county fair the Newburyport Herald published the list of premiums and gratuities. I had several varieties of pears entered—my brother had none, but two of the premiums were awarded to him. I went to the Herald office to have it corrected. The editor said it was a mistake which would not affect the report of the Society. Also, the report on bees and honey were made each for D. T. B. and D. C. B., and $1, each, for Mr. Alley and Mr. Green. I mention this to show that there was an error in the account of pears, and I did not know but there was on the bees; for when the awards were paid to the parties in this city (arrangements having been made by the Society for the Treasurer of Newburyport to pay a part of them), I went for mine and found that the Treasurer was authorized to be governed by a report furnished to him by the Agricultural Society, and in that report my bees and honey were awarded four dollars and D. C. Batcheldor nothing, Mr. Green and Mr. Alley one dollar each. These are facts, and I would ask in all candor, how far my statement was from being correct.

Second. That Mr. Alley should deny that there were "three or four old bee-keepers present with their experience and new style hives, and friend Alley with the rest," is impossible, for his own article, on page 196, acknowledges it.

Third. My reasons for saying—"all said their bees did nothing this year," was from what knowledge I had obtained from bee-keepers during the past year, and I had no small interest in that direction. I was at my brother's place several times and saw his bees. He invariably said that his bees were doing nothing, or to that effect. He had four swarms and only one cast a swarm last year (1869). From the other three he got no surplus honey; the one that cast a swarm, was storing some honey, but not much. Mr. Calvin Rogers resides some four miles from this place in West Newbury. One day last August I drove to his farm on purpose to learn what his bees were doing. He had some thirty stocks and they had cast only four or five swarms and had collected but little honey. Mr. Hiram Rogers, of West Newbury, was at my place, and represented the same about his bees. Mr. J. L. Newhall took but one box of honey from his two stocks of bees, and they cast no new swarms. Capt. Davis Wood, Mrs. W. C. Morse, Mr. Amos Coffin, of this city, got neither swarms nor surplus honey. Mr. Noyes, of Seabrook, where friend Alley has been, inserting queens and dividing swarms, I have not seen; but I have seen several of his neighbors. They say he had poor luck the past year. Mr. Alley was at my place twice last season. The last time he was there, he said that my bees were doing better than his. I submit, Mr. Editor, why should I not say to you that their bees did nothing this year?

So much for Mr. A.'s assertions. Now let us see how it is with his statements. He says:—"Mr. D. C. Batcheldor, of Newburyport, brother of the gentleman named above, had a stock of bees on exhibition in one of my new style Langstroth hives. Last season (1869) they stored at least forty pounds of honey in small boxes." They did not store that amount by more than one quarter part. My brother told me so within one week. And this is not all. He had old comb in his boxes, for which his own word is my authority; whereas, in mine every particle of comb was made the past season. Now, Mr. A. says—"On the first day of June one of the combs in the brood box broke down, and destroyed more than two quarts of bees." Perhaps he may intend this for an advertisement to sell his new style of hive, as he is very anxious to introduce them. I would say, for his benefit, that they do not all do so, for my brother had another swarm in the same style of hive, that did not break down, neither did it cast a swarm or give any surplus honey. Mr. A. also says, "this hive was exhibited with all the boxes in it, but had the outside case removed so that the boxes could be seen, and all of them (66) had more or less honey in them." Now, what does all this amount to, when we take into account that they are three pound boxes and not to exceed twenty-five pounds of honey. A few of the front boxes were sealed, but the great majority of them had little or no honey in them. They could not be weighed with any degree of accuracy, and never were. Mr. A. says, "the sum of six dollars only was divided between four bee-keepers, and this was only to partly pay for the trouble of putting the bees into the hall and taking them out again." Singular enough! I wonder if anybody else ever got that idea through their cranium! Mr. A. came all the way from Wenham, by rail, some sixteen miles, and Mr. Green, from Amesburg, some five miles, or more, and each received one dollar, as part pay, while parties within two gunshots of the hall got four dollars, as though there were no other merits in the case. Preposterous! Mr. A. says "D. T. Batchelder received two dollars." This is not correct as I have shown. D. C. Batchelder says he has not yet received anything. Mr. Alley says he has. Which would be most likely to know, I will leave for your readers to decide.

I would like to see a statement in the BEE JOURNAL of what friend Alley's bees have done the past year, to let its readers know what kind of show he can make.*

Now, Mr. A. when you try again, be careful that you do not wake up the wrong person.

So, hurrah for the BEE JOURNAL! A statement of facts and a backbone to back them.

N.B. I think my bees have been brooding the past winter. Toward the last of January, on warm sunny days, bees two-thirds grown lay at the entrance of the hives. Is this common?—D. T. BATCHELDER.

ALLENSVILLE, (KY.) March 16.—My bees are in fine condition, having passed the winter on their summer stands, and are breeding rapidly. Last year was a good season in my locality.—J. H. JOHNSON.

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* Mr. Alley's business is mainly to raise Italian queens, on an extensive scale; and of course his apiary could not be expected to make a large show of honey.—ED.

SALEM, ILLS., March 24.—I have taken my stocks out of their winter quarters. They are very lively, and gathering pollen rapidly from the maples, &c. I have a number of hybrid stocks, and am anxious to get the full blood as soon as may be. I think when the people see the benefit of papers in the increased yield of honey; in the beautiful yellow workers; and in the security against loss of queens or damage from the moth; they will think a two dollar investment for the BEE JOURNAL will pay them.—R. W. PRATT.

ST. CATHARINE'S, CANADA, April 4.—My bees have wintered splendidly on their summer stands, thanks to your valuable paper, while black bees all around me in every direction, for scores of miles, have gone (as Jim Fisk says) "where the woodbine twineth." I wish the A. B. JOURNAL came, as Sunday comes, once a week.—O. FITZ WILKINS.

ST. CHARLES, ILL., April 9.—We finished setting out our bees on the 6th inst. Loss less than ten per cent. Stocks the strongest for several years. We have sold the balance of our comb honey at 25 cents per pound and the extracted at 20 cents. At this price, will it pay to use boxes? The honey extractor has been a great help towards the well wintering of our bees.—J. M. MARVIN.

LEWISTON, April 8.—Who has catnip seed for sale? I have tried the bee-feeder described by NOVICE in your April number, and it works splendid. Many thanks to Novice.—H. LIBBY.

CHARLESTON, ILL., April 9.—Allow me to say that yours is the ablest and by far the most reliable bee paper I have yet seen, and I am inclined to give it as my opinion that the "AMERICAN BEE JOURNAL" will survive the day of mushroom publications, and stand the more firmly when the storm shall have passed, *by reason of the opportunity of comparison.*—H. C. BARNARD.

[For the American Bee Journal.]

Wintering Bees.

MR. EDITOR:—I am still of the opinion that bee-keepers should give their experience every spring in wintering their bees, the number of hives, the kind of hives, kind of bees, where kept, and the results.

I am well satisfied that the only true policy in wintering bees, is to put them in some kind of suitable winter quarters. I have a double walled house, built of good pine lumber, tightly battoned, with good shingle roof. It is twelve by sixteen feet outside, with two feet space between the outer and inner walls, filled in tightly with dry straw all around and overhead; a room cut off four feet in front for keeping tools, honey boxes, &c., with double doors in front, and ventilated by two zinc tubes, two inches in diameter, through the walls, opposite each other, on the east and west sides, with a ventilator six inches square through the roof, making a room eight feet square inside, dark as midnight, and of a perfectly even temperature.

Into this house I put sixteen colonies of Italian bees on the 27th of November; seven of them in Langstroth's shallow, movable comb hives, four in the Hotchkiss dividing hive, three in deep movable comb hives, and two in Eddy box-hives. At the time I put them in, one in a deep frame hive was weak in bees, and one in the shallow hive short in stores. I took out all the honey boxes, but left the honey-boards on, and set them in rows, one on the top of the other, three and four deep; lifting the top cover of the Langstroth hive, and inserting a stick half an inch thick for ventilation, and opening the doors of the remainder about the same distance. Here they were left undisturbed all winter.

Now for the result. On the 25th of March, which was a nice bright day, I brought out five of them, two of the deep hives, and one of each of the other kinds, and on opening them found they were in the finest possible condition, with scarcely any perceptible diminution of stores, much stronger in numbers, and with plenty of eggs and young bees in every stage of development. The one that was weak in the fall seemed as strong as any of the others. I was perfectly astonished to see many young bees with apparently so little loss of honey.

The next day, and as the weather permitted, I removed all the rest and found them as lively and brisk, as if they had only been resting over night, and on bringing out my meal trough well supplied with finely chopped rye and oats, they "pitched in" as though they were determined to carry box and all away.

Now I want to hear from all our beekeeping friends who read the Journal. Give us your mode of wintering, with all the particulars connected therewith. It seems to me that this would be productive of great good to young beginners. We might learn much from each other's experience.

I cannot tell why it is but I have somehow become warmly attached to the BEE JOURNAL and all its correspondents. They all seem like old acquaintances, yet I have never seen one of them; but I love beautiful little bees and every one who takes an interest in them.

GEO. HARDESTY.

Malvern, Ohio, April 2, 1870.

[For the American Bee Journal.]

Gallup on Hives.

On page 172, February number, Mr. L. M. Lindley wishes to know what Gallup thinks of his form of hive for Minnesota climate; and as he acknowledges himself a new beginner, suppose Gallup has a little talk with him about hives, through the BEE JOURNAL, for his benefit as well as the benefit of others.

In old box hive times, a circular hive, about twelve or fourteen inches high and twelve inches in diameter, in the clear, or inside measure, would produce more bees than any other form of hive I ever saw. Queens would commence breeding earlier, breed more abundantly, and they would send out earlier and larger swarms, and more of them than any other form. A hive two inches less in diameter, and enough taller to make the same capacity, would not come up to the above; and a hive two inches larger in diameter and ten inches high, did not prove satisfactory.

From repeated observations, I have found that

a good average swarm of bees, in cold spring weather, occupies (together with their comb) a circular space equal to twelve inches in diameter, when in the right form of hive to allow them to cluster naturally. Now, if we take it for granted that my conclusions are correct so far, we can easily see that any great departure from this form is wrong, for a cold climate like Minnesota. A correspondent who stated, in the BEE JOURNAL (about the time that Gallup was having his awful muss about hives), that he used the shallow hive, and that he wanted no other, finally concluded to try a different form, and still call it a Langstroth hive. He wrote to me last spring, and acknowledged that all his swarms in his new style hive were at least twenty days ahead of those in his old style of Langstroth hive. While his new style was full of brood, his old style was just commencing to breed; consequently his new style hives, in the same yard and with the same care, were ready to divide or swarm twenty days earlier than his old style hives. In my experience (and understand my experience has always been in the North) the difference has ever been from twenty to thirty days in favor of a hive of the right form. In Minnesota, your springs are always cool and windy, until about the first part of June, especially in the open prairies.

There are a great many people who have always used box hives; and when they first obtain a frame hive, they like it so much better than the box hive (without any regard to what the form may be) that they think their form of hive is the best in use; while the fact is, they are not competent judges. We can only arrive at safe conclusions after experimenting, for a series of seasons, with differently formed hives.

In transferring from hollow trees, and from all kinds of box hives, of every conceivable form, I have always noticed that there was only about from ten to twelve inches in depth of comb occupied with brood, except in rare cases. If a large quantity of brood is expected early in the season, our frames should not be so broad that the bees cannot occupy the full breadth of the comb from outside to outside.

E. GALLUP.

Orchard, Iowa.

[For the American Bee Journal.]

A Queen among Fertile Workers.

Last summer, after asking my "five questions," I introduced a small, black virgin queen into a colony of many fertile workers. She was kindly received and protected, the workers at the same time continuing to lay. Being encouraged, and yet not wishing to retain the black queen, I ventured a little further; and at the end of four days introduced a *fertile* laying Italian queen. She was also received and protected. She laid eggs liberally in one part of the hive, and the fertile workers laid in another part for five days, then the bees *carried out alive* the laying workers, and the queen and colony went on all right.

J. W. GREENE.

Chillicothe, Mo., April 10, 1870.

[For the American Bee Journal.]

Black Queens from pure Italian Brood!

Last fall I raised several nice queens *as black as a crow all over*, from the purest Italian brood, and other ones of the most beautiful golden color, on the same combs, at the same time. I presume there is no nicer queen or better marked workers in all the country, than the mother and worker-sisters of these jet black queens. I am positive that the worker sisters of these black queens carried in pollen liberally at fourteen days old. I did not save the black queens, but their queen sisters of the same age bring on pure worker progeny.

Has any one else had similar experience? Will some one explain? J. W. GREENE.

Chillicothe, Mo., April 10, 1870.

[For the American Bee Journal.]

"All Aboard!"

On the Great Apiarian Railroad they now run two trains:—

The 1st, or EXPRESS, with conductors Gallup and Novice, who believe there has been improvement in the past, and are for progression in the future, in all that pertains to the science of Bee-keeping, Bee Hives, Bee Management, Wintering of the Bees, improving the breed, and improving the practice. And—

The 2d, or WAY TRAIN, with mixed freight and sleeping-car. This carries all bee-keepers who believe in box hives, fixed frames, tight tops and side-doors; and that there has been and cannot be any improvement in bee-keeping, bee management, bee hives, bee moth-traps, bee feeders, or in wintering bees.

Among the passengers on this train too are those who believe, "or would make others believe," that an artificially raised queen is never consumptive or asthmatical, nor ever has atrophia, scrofula, or nervous debility, nor proves sterile, or miscarries; and that when such queens are *large* and look like a *splendid* FERTILE queen, they never have the dropsy or colic, or are not badly constipated, with general debility of the vital powers, and are worthless—except for the five or twenty dollars they bring their *breeders*.

This slow train also carries all who believe bee-keeping has not improved in the last twenty years, since I went into it; are still quoting from their note-books of twenty years ago, and defending exploded theories—because, under the light of science, they once advocated certain standard hives and systems of bee management. They persistently stick to the theory, hive, and management, because in a past age it was thought good; and will not heed the wreck of fond hopes and the loss of millions of money it has caused, but adhere to it even in the light of present truth, because they think that to be consistent, they must advocate it in the future as in the past.

All such Rip Van Winkles in bee-keeping have secured berths in the sleeping car to the end of life's journey. J. M. PRICE.

Buffalo Grove, Iowa.